PB-213 135

SOLID WASTE HANDLING AND DISPOSAL IN MULTI-STORY BUILDINGS AND HOSPITALS. VOLUME IV. SELECTION AND DESIGN OF SOLID WASTE SYSTEMS

ESCO/GREENLEAF

Prepared for:

Environmental Protection Agency

1972

DISTRIBUTED BY:

NTIS
National Technical Information Service
U. S. DEPARTMENT OF COMMERCE
5285 Port Royal Road, Springfield Va. 22151

BIBLIOGRAPHIC DATA SHEET	1. Report No. EPA-SW-3.D.4-72	2.	PB 213 135

4. Title and Subtitle
Solid Waste Handling and Disposal in Multistory Buildings and Hospitals. Volume IV. Selection and Design of Solid Waste Systems.

5. Report Date
1972

6.

7. Author(s)
ESCO/GREENLEAF

8. Performing Organization Rept. No.

9. Performing Organization Name and Address
ESCO/GREENLEAF
1127 West Washington Boulevard
Los Angeles, California 90015

10. Project/Task/Work Unit No.

11. XXXXXX/Grant No.
EC-00164

12. Sponsoring Organization Name and Address
U.S. Environmental Protection Agency
Office of Solid Waste Management Programs
Washington, D.C. 20460

13. Type of Report & Period Covered
Final Report

14.

15. Supplementary Notes
→ The report concerns

16. Abstracts → A study of solid waste handling, storage, processing, and disposal systems and practices in multistory buildings, hospitals, and detention facilities. The complete study is reported in four volumes. Volume I presents a digest of study objectives, development of systems evaluation methodology, and criteria for systems design, together with a brief review of the total study. Volume II is a detailed study and evaluation of systems and practices in fifteen County-owned building complexes. Volume III covers an investigation and evaluation of available solid waste handling, storage, processing, and disposal equipment and systems adaptable to building installations. This volume provides an extended evaluation of systems adaptable to the various classifications of buildings and complexes considered in the study, with recommendations for operational improvements or modifications of existing systems as may be required in each type of facility. Design criteria and preliminary design of systems modifications, together with outline specifications and cost estimates covering installation and operation, are developed on a selected building complex.

17. Key Words and Document Analysis. 17a. Descriptors
*Refuse disposal, Materials handling, *Storage, Materials handling equipment, Operating costs, Hospitals, Office buildings, Design criteria

17b. Identifiers/Open-Ended Terms
*Solid waste systems, Modified solid waste systems, *Waste handling, *Solid waste processing, Detention facilities, Multistory buildings

Reproduced by
NATIONAL TECHNICAL INFORMATION SERVICE
U S Department of Commerce
Springfield VA 22151

17c. COSATI Field/Group 13B

18. Availability Statement Release to public	19. Security Class (This Report) UNCLASSIFIED	21. No. of Pages 189
	20. Security Class (This Page) UNCLASSIFIED	22. Price $3.00

ia

EPA-SW-34D.4-72

SOLID WASTE HANDLING AND DISPOSAL IN MULTISTORY BUILDINGS AND HOSPITALS

VOLUME IV Selection and Design of Solid Waste Systems

This final report (SW-34d.4) on work performed under solid waste management demonstration grant no. EC-00164 to the County of Los Angeles was written by ESCO/GREENLEAF *and is reproduced as received from the grantee.*

VOLUMES I and III	*Summary, Conclusions, and Recommendations* (SW-34d.1) and *Research on Systems Development* (SW-34d.3) are available from the U.S. Government Printing Office, Washington, D.C.
VOLUME II	*Observations of Local Practices* (SW-34d.2) is available under separate cover from the Department of Commerce, National Technical Information Service, Springfield, Virginia.

Reproduced from best available copy.

U.S. ENVIRONMENTAL PROTECTION AGENCY

1972

ib

An environmental protection publication in the solid waste management series (SW-34d.4).

This report has been reviewed by the U.S. Environmental Protection Agency and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the U.S. Environmental Protection Agency, nor does mention of commercial products constitute endorsement or recommendation for use by the U.S. Government.

FOREWORD

In the past century of national growth, reflected in increased population, expanding municipalities, and greater industrial and commercial enterprises, this Nation responded with nonconcern to a concurrent physical deterioration of the country. The first comprehensive water pollution control legislation was not enacted until 1956; the first comprehensive air pollution legislation, in 1963. Finally, six years ago, legislation acknowledged a national solid waste problem--a pollution that can pervade the air, water, and land.

Under the Solid Waste Disposal Act of 1965 (Title II, P. L. 89-272) and now under the broader mandate of the Resource Recovery Act of 1970 (P.L. 91-512), municipalities and other agencies are eligible to apply for Federal demonstration grants to study, test, and demonstrate techniques which advance the state of the art in the solid waste management field.

Disquieting statistics compiled by the U.S. Environmental Protection Agency point up the significance of these solid waste management demonstration projects. The Nation's outlay for getting rid of its debris is $4.5 billion annually--and growing. Most of this cost is: (1) for collecting only part (180 million tons) of the 360 million tons of household, commercial, and industrial waste actually being generated; (2) for disposing of it in dumps or landfills (94 percent of which are unsatisfactory) or in incinerators (75 percent of which are inadequate). One basic Federal policy has been to encourage the concept of areawide solid waste management as a sound vehicle for raising the overall level of these sanitation services to safeguard environment and public comfort.

The County of Los Angeles received one of these demonstration grants, to make an in-depth study of solid waste handling and disposal in multistory buildings and hospitals. The results are reported herein.*

--SAMUEL HALE, JR.
Deputy Assistant Administrator
for Solid Waste Management Programs

---

*For studies also related to collection and disposal of solid wastes in high-rise buildings, refer to National Academy of Sciences--National Research Council. Collection, reduction, and disposal of solid waste in high-rise multifamily dwellings. Rockville, Md., U.S. Environmental Protection Agency, 1971. [Distributed by National Technical Information Service, Springfield, Va., as PB 198 623. 169 p.]

ACKNOWLEDGMENT

The ultimate purpose of this study is to determine improved solid waste handling and disposal techniques adaptable to various types of multistory buildings, hospitals and detention facilities. This research initiated by the Project Planning and Pollution Control Division, Department of County Engineer, County of Los Angeles, was performed with the assistance of the Solid Wastes Program, National Center for Urban and Industrial Health, U.S. Public Health Service, Department of Health, Education, and Welfare,* and through guidance of the Advisory Committee on Solid Wastes, organized by the Department of County Engineer to assist the project team throughout the study period.

ESCO-GREENLEAF, A Joint Venture (Engineering Service Corporation, Los Angeles, California, and Greenleaf/Telesca, Engineers & Architects, Miami, Florida) was selected by the Board of Supervisors to conduct this study in collaboration with the Project Planning and Pollution Control Division. Special consultants assisting the project staff in certain aspects of the study include Elmer R. Kaiser, Senior Research Scientist, New York University; George S. Michaelsen, Professor and Director, Division of Environmental Health and Safety, University of Minnesota; Richard G. Bond, Professor, School of Public Health, University of Minnesota; Donald Vesley, Assistant Professor, School of Public Health, University of Minnesota; and Gordon P. Larson, Air Pollution Control Consultant, Philadelphia, Pennsylvania.

Considerable interest in this study has been shown by many governmental agencies, equipment manufacturers and individuals directly concerned with the subject. With this encouragement, together with the direct and indirect assistance of numerous contributors, enthusiasm for successful completion of the study has been maintained.

Sincere appreciation is extended to the administrators and staffs of all hospitals, members of the Sheriff's Department and representatives of the Department of Building Services, who cooperated and assisted in the on-site investigations in those buildings under their respective jurisdictions.

The constructive criticism and guidance of members of the Advisory Committee on Solid Wastes were invaluable and special recognition for the member agencies is warranted. Agencies represented in this Committee include: Los Angeles County, Hospital Department, Mechanical Department, Building Services, Health Department, Forester and Fire Warden, Department of County Engineer, and Air Pollution Control District; and the State of California, Department of Public Health and Regional Water Quality Control Board.

---

*Now the Office of Solid Waste Management Programs, U.S. Environmental Protection Agency.

PREFACE

Problems of solid waste collection and disposal in institutions and other multistory buildings mirror many of the same problems confronting the community at large--in greatly magnified form. In large building complexes, as in many of the Nation's communities, solid waste systems often are so crude as to be termed, in the words of this report, "manhandling." Either in large buildings, the subject here, or in a community, a two-prong approach will be necessary--immediate application of improved methods that are presently available, and then planning and research for optimal future solutions.

This study, supported in part by solid waste management demonstration grant no. GO6-EC-00164 from the Environmental Protection Agency, reflects this approach, and hopefully will motivate administrators and designers concerned with multistory complexes to consider solid waste handling and disposal as an integral factor in the total service system provided for these buildings. Such a consideration must take into account safety, sanitation, convenience, and cost. The complete study is reported in four volumes:

Volume I, Summary, Conclusions, and Recommendations, presents a digest of study objectives, development of systems evaluation methodology, and criteria for systems design, together with a brief review of the total study. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C.

Volume II, Observations of Local Practices, is a detailed study and evaluation of systems and practices in fifteen County-owned building complexes, including seven hospitals, four multistory office buildings, and four detention facilities, varying in function and size within each classification. This report establishes the theoretical standards of operation peculiar to each plant and, through field observations, actual operating conditions of these systems. Available from the U.S. Department of Commerce, National Technical Information Service, Springfield, Virginia 22151.

Volume III, Research on Systems Development, covers an investigation and evaluation of available solid waste handling, storage, processing, and disposal equipment and systems adaptable to building installations. This report provides coverage on both marketed systems and equipment components, as well as systems concepts in the development and "idea" stage. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C.

Volume IV, Selection and Design of Solid Waste Systems, provides an extended evaluation of systems adaptable to the various classifications of buildings and complexes considered in the study, with recommendations for operational improvements or modifications of existing systems as may be required in each type of facility. Design criteria and preliminary design of systems modifications, together with outline specifications and cost estimates covering installation and operation, are developed on a selected building complex. Available from the U.S. Department of Commerce, National Technical Information Service, Springfield, Virginia 22151.

John A. Lambie, County Engineer, County of Los Angeles, was the project director for this study; Peter M. McGarry, with our Division of Demonstration Operations, was the project officer.

--JOHN T. TALTY, *Director*
Division of Demonstration Operations
Office of Solid Waste Management Programs

Page No.

CONTENTS

I INTRODUCTION I-1

II SOLID WASTE SYSTEM REGULATIONS II-1

III MODIFICATION OF HOSPITAL SYSTEMS III-1

IV MODIFICATION OF OFFICE BUILDING SYSTEMS IV-1

V REVIEW OF STUDY V-1

VI PROPOSED PILOT PROJECT VI-1

Page No.

APPENDICES

A SUMMARY OF CODES AND REGULATIONS a-1

B LAC-USC MEDICAL CENTER

Numerical Rating of Modified Systems b-1
Estimated Daily Labor Costs b-3

C LONG BEACH GENERAL HOSPITAL

Numerical Rating of Modified Systems c-1
Estimated Daily Labor Costs c-3

D HARBOR GENERAL HOSPITAL

Numerical Rating of Modified Systems d-1
Estimated Daily Labor Costs d-3

E RANCHO LOS AMIGOS HOSPITAL

Numerical Rating of Modified Systems e-1
Estimated Daily Labor Costs e-3

F JOHN WESLEY HOSPITAL

Numerical Rating of Modified Systems f-1
Estimated Daily Labor Costs f-3

G OLIVE VIEW HOSPITAL

Numerical Rating of Modified Systems g-1
Estimated Daily Labor Costs g-3

H MIRA LOMA HOSPITAL

Numerical Rating of Modified Systems h-1
Estimated Daily Labor Costs h-3

The preceding volumes of this study have presented background data identifying the functions and components of solid waste systems in the various types of building complexes under study. Observations of these systems in selected local buildings have recorded the prevailing level of operating standards, the mechanics, and efficiencies or deficiencies, in their existing operation. Further evaluations have indicated the environmental effects and costs of operation of the various components within these building systems, all as a means of identifying weaknesses and needed improvements.

Concurrently with these observations, an investigation was conducted to establish the present "state-of-the-art" in methods and equipment developed for or adaptable to solid waste systems in buildings. Basic guidelines have been advanced for defining system requirements in these various types of buildings, and procedures have been suggested for the evaluation of methods and equipment in the design of workable systems for buildings in the design stage as well as existing buildings.

Scope and Objectives of the Continuing Study:

The continuing study as presented herein is broadly concerned with the evaluation of various feasible methods for improvements to solid waste systems in existing buildings and specifically for the solid waste systems of those County-owned and operated building complexes previously investigated (Volume II) and as listed below:

Hospitals:

LAC-USC Medical Center
Long Beach General
Harbor General
Rancho Los Amigos
John Wesley
Olive View
Mira Loma Hospital

Detention Facilities:

Mira Loma Sheriff's Facility
Central Jail
Sybil Brand Institute
San Fernando Juvenile Hall
Hall of Justice

Office Buildings:

Hall of Records	County Courthouse
Hall of Administration	County Engineer Building

In the course of this evaluation, reference to or repetition of background data presented previously will be minimal. In order that the reader be informed on the details involved in the evaluation procedures, terminology, etc., as well as insight into the total scope of this study, review of the preceding volumes is recommended.

The principal objective of the continuing study is the determination of methods of storage, handling, processing and disposal that can best be employed where warranted to improve the operating efficiencies of solid waste systems in each of the types of buildings under study. This determination involves the investigation of statutes, regulations and codes as they may affect the selection, installation and operation of equipment components in the system. Comparisons of installation and operating costs and benefits of those systems suitable for each type of building are also made and conclusions are presented together with positive recommendations for system improvements.

Organization of Material:

Presentation of material contained herein incorporates (1) a review of principal codes and regulations locally applicable to solid waste systems and management, (2) the evaluation of various types of system improvements considered for selected buildings, and (3) the description of proposed solid waste system modifications at the LAC-USC Medical Center, cost estimates and analysis of benefits of this project, together with an outline of a continuing studies program.

Applicable regulatory controls pertaining to operation and maintenance of solid waste systems in buildings include building, fire, pollution and health codes and other local restrictive ordinances, as well as departmental or in-plant regulations and certain special controls such as the Hospital Licensing Act applicable in California.

Review of local codes and ordinances indicates the multitude of regulations affecting solid waste system design and operation. A digest of these regulations reviewed is appended (Appendix A) illustrating examples of the controls that apply. Many of these regulatory measures have certain special interests, such as fire prevention and control, air pollution control, water quality control, noise abatement or control, land use control and sanitation control (water and sewage). Certain of the codes, such as hospital regulations and building codes have multiple interests. Building codes and regulations are written with the objective of providing requirements or operating procedures for all types of institutions and facilities within the jurisdiction of the legislative body. To accomplish this purpose, as in the case of most regulations, the language used must be broad enough to encompass all of the possible locations and conditions. Since unique situations arise because of new developments or changing conditions, the legislative bodies have delegated some authority to specific positions such as the State Fire Marshal or Local Health Officer. Those individually in these positions are permitted to interpret the various codes in the light of new or unusual circumstances.

The various codes, regulations and ordinances incorporate such general terms as safe, sanitary, clean, good housekeeping, sufficient, etc. The precise parameter of such terms is difficult to put into numbers or words which satisfy all of the criteria of affected parties. As an example, it is virtually impossible to secure agreement among affected authorities as to where the dividing line between sanitary and insanitary should be placed. Such a precise distinction could distinguish uncategorically between safe and unsafe from a disease causation standpoint, but no such distinction can easily be made.

The sampling of local codes related to solid waste systems neither reveals conflicts nor does it reveal comprehensive guidelines for the total system such as may be found in electrical, plumbing or other mechanical codes.

Very little comprehensive study on the interrelationship of codes has been performed in the area of waste handling and disposal in hospital facilities or other building types. Based on the concept of this study that the solid waste system in buildings is an identifiable mechanical equipment component, the need for development of design guidelines coordinated with present code requirements and new methods and practices is vital, and research on the development of a model code governing solid waste systems in buildings is warranted and recommended.

CHAP. III MODIFICATION OF HOSPITAL SYSTEMS

Page No.

SYSTEM CRITERIA III-2
Handling Requirements III-2
Storage Requirements III-3
Processing and Disposal Requirements III-3
Effect on Community III-5

EVALUATION PROCEDURES - Environmental Aspects III-7

EVALUATION PROCEDURES - Economic Aspects III-9

LAC-USC MEDICAL CENTER III-11

LONG BEACH GENERAL HOSPITAL III-18

HARBOR GENERAL HOSPITAL III-24

RANCHO LOS AMIGOS HOSPITAL III-30

JOHN WESLEY HOSPITAL III-36

OLIVE VIEW HOSPITAL III-42

MIRA LOMA HOSPITAL III-48

SUMMARY III-54

Page No.

LIST OF TABLES

III-1 Comparison of Hospital Solid Waste Systems
LAC-USC Medical Center
Percentage Deficiencies of Sub-System Functions III-13
III-2 Comparison of Project Costs
LAC-USC Medical Center III-15
III-3 Economic Evaluation of Solid Waste System Modifications
LAC-USC Medical Center III-16
III-4 Comparison of Hospital Solid Waste Systems
Long Beach General Hospital
Percentage Deficiencies of Sub-System Functions III-19
III-5 Comparison of Project Costs
Long Beach General Hospital III-21
III-6 Economic Evaluation of Solid Waste System Modifications
Long Beach General Hospital III-22
III-7 Comparison of Hospital Solid Waste Systems
Harbor General Hospital
Percentage Deficiencies of Sub-System Functions III-25
III-8 Comparison of Project Costs
Harbor General Hospital III-27
III-9 Economic Evaluation of Solid Waste System Modifications
Harbor General Hospital III-28
III-10 Comparison of Hospital Solid Waste Systems
Rancho Los Amigos Hospital
Percentage Deficiencies of Sub-System Functions III-31
III-11 Comparison of Project Costs
Rancho Los Amigos Hospital III-33
III-12 Economic Evaluation of Solid Waste System Modifications
Rancho Los Amigos Hospital III-34
III-13 Comparison of Hospital Solid Waste Systems
John Wesley Hospital
Percentage Deficiencies of Sub-System Functions III-37
III-14 Comparison of Project Costs
John Wesley Hospital III-39
III-15 Economic Evaluation of Solid Waste System Modifications
John Wesley Hospital III-40

Page No.

LIST OF TABLES (Continued)

III-16 Comparison of Hospital Solid Waste Systems
Olive View Hospital
Percentage Deficiencies of Sub-System Functions III-43
III-17 Comparison of Project Costs
Olive View Hospital III-45
III-18 Economic Evaluation of Solid Waste System Modifications
Olive View Hospital III-46
III-19 Comparison of Hospital Solid Waste Systems
Mira Loma Hospital
Percentage Deficiencies of Sub-System Functions III-49
III-20 Comparison of Project Costs
Mira Loma Hospital III-51
III-21 Economic Evaluation of Solid Waste System Modifications
Olive View Hospital III-52
III-22 Comparison of Hospital Solid Waste Systems
Effect of System Modifications III-55

LIST OF FIGURES

III-1 Comparison of System Deficiencies
LAC-USC Medical Center III-14
III-2 Comparison of Economic Desirability of Systems
LAC-USC Medical Center III-17
III-3 Comparison of System Deficiencies
Long Beach General Hospital III-20
III-4 Comparison of Economic Desirability of Systems
Long Beach General Hospital III-23
III-5 Comparison of System Deficiencies
Harbor General Hospital III-26
III-6 Comparison of Economic Desirability of Systems
Harbor General Hospital III-29

LIST OF FIGURES (Continued)

III-7 Comparison of System Deficiencies Rancho Los Amigos Hospital III-32
III-8 Comparison of Economic Desirability of Systems Rancho Los Amigos Hospital III-35
III-9 Comparison of System Deficiencies John Wesley Hospital III-38
III-10 Comparison of Economic Desirability of Systems John Wesley Hospital III-41
III-11 Comparison of System Deficiencies Olive View Hospital III-44
III-12 Comparison of Economic Desirability of Systems Olive View Hospital III-47
III-13 Comparison of System Deficiencies Mira Loma Hospital III-50
III-14 Comparison of Economic Desirability of Systems Mira Loma Hospital III-53

From the descriptions of existing systems in local hospitals detailed in Volume II, critical problems were identified that are common to the majority of hospitals visited across the country and likely common to nearly all hospitals in general. Observations at these local hospitals indicate comprehensive policies have been adopted regarding solid waste management. Generally, these policies are adequate, including specific directives for segregation and special handling of hazardous materials. Practical enforcement of these policies is where the systems break down. Inadequacies in performance are largely due to the "people factor" built into the system and the inability of the workers to make correct judgments consistently.

Upgrading of the conventional solid waste system may be approached in several ways. For example, immediate solutions may be considered for improving methods in handling an individual type of waste or minor modifications of selected functions within the system.

Those unacceptable conditions in the existing waste system should be met with interim remedial measures until such time as acceptable long range solutions can be considered and adopted. These interim remedial measures would generally be confined to policy enforcement and would rely largely on the capabilities of supervisors and cooperation of workers. Such changes can only be implemented and carried out successfully when accompanied by a continuing surveillance program. The value and benefits of a sanitarian carrying among his duties the responsibility for surveillance of the total solid waste system would be indispensable. In those hospitals inspected, the prevailing lack of surveillance of the solid waste system operation was evident. It is reasonable to expect such surveillance with the cooperation of supervisory personnel would have marked effect on working personnel and conditions of the entire system. Concentration on improvements of initial preparation of wastes, i.e. devising workable methods of breaking, packaging or containerizing disposable syringes, needles, instruments, etc. at the ward level would reduce hazards in handling and the possibility of ultimate reuse. Improvements in maintaining proper handling and disposal of pathological wastes, separation of reusables and disposables, proper bagging of materials, prompt deposit of materials in chutes, close supervision of storage, processing and disposal areas, and maintaining security in these areas against access by unauthorized personnel are needed improvements that will lead to a more nearly acceptable level of operation and that may be accomplished through a continuing surveillance program. In the conventional waste system in the larger institutions, which relies totally on the performance of manpower, costs of intensive supervision and surveillance will be relatively high, but are necessary if attempting to implement such an interim remedial program.

Conversely, the total system may be modified with the design of a single integrated closed system to handle all types of materials insofar as practical. With the development of a modified system whereby the majority of waste materials can be conveyed in a mechanized closed transport system, such surveillance will be limited to initial handling techniques at the ward level and final handling at the processing and disposal stations.

SYSTEM CRITERIA

The necessity of a closed system for the transfer, storage, processing and disposal of hospital wastes is founded on the premise that all such wastes are contaminated. This is based on observations that segregation of identifiable contaminated and uncontaminated waste materials is neither accomplished in practice nor likely to be practically or economically enforced. Composition of these wastes include many salvageable materials that could prove harmful upon reclamation and reuse. In the interest of public health and welfare, it was concluded that in addition to the closed transport system on-site disposal should be preferred or on-site processing of these materials should be accomplished to produce a sterile homogeneous material suitable for safe off-site transport and disposal.

Capabilities of presently developed equipment are not sufficiently flexible to achieve a closed system design that will handle all wastes from point of generation through a point of disposal in either new buildings or modifications of systems in existing buildings. However, it does appear feasible that systems can be assembled that will handle the majority of these materials from centrally located accumulation points on each floor to central storage or processing locations.

Handling Requirements:

Due to the prevailing high ratio of reusable soiled linens to disposable wastes, it appeared necessary for the selected waste handling system to have the capabilities of moving both materials. General materials handling systems, either of the automated mechanical conveyor type or automated cart type, could not be adapted within these existing buildings due to physical plant layout, limitations of space, conflicts with internal traffic elements and mechanical and structural obstacles. The only alternative handling system available, having the required capabilities, that could be adapted within existing plants appeared to be pneumatic conveyors. Although twin tube systems are available for separate handling of linens and wastes, consideration has been limited herein to the single tube system based on lesser space requirements and economy. Flexibility in adapting this type of system within the existing building would permit collection from the base of chutes without extensive modifications to the existing chute system. Evacuation of accumulated materials could be accomplished at frequent intervals, transferring the materials to their respective central storage locations.

Storage Requirements:

This closed system concept also favors elimination of storage and rehandling of wastes. With the use of the pneumatic conveyor system, intermediate storage requiring physical rehandling after deposit in the chutes would be eliminated. With the added consideration of placing the vertical chutes under slight negative pressure to minimize aerosol contamination, the transport system would meet the desired level of environmental standards which the closed system can provide. Utilization of automated mechanical conveyors or cart systems (which are more adaptable to buildings in the design stage) for the transport of sealed containers would afford a similar level of environmental standards providing space availability would permit their use. In either case, the only storage elements required in these types of closed systems are the initial storage facilities in the Unit system and central storage in the Inter-Building system.

Processing and Disposal Requirements:

Considering the criteria established for disposal of contaminated hospital wastes, a number of methods have been evaluated. These methods identified below are listed in their order of desirability.

1. Transportation of pulped or ground hospital wastes in the sanitary sewer system with on-site sterilization or subsequent sterilization, oxidation and digestion at an off-site treatment plant will assure freedom from contamination hazards.

2. Transportation and landfill of residue from hospital refuse after thorough on-site incineration or pyrolysis is a safe method without danger of contamination.

3. Transportation and landfill disposal of hospital refuse after pulping or grinding and sterilization is a safe method without danger of contamination.

4. Transportation of pulped or ground hospital waste in the sanitary sewerage system with dewatering and disposal at an off-site treatment plant should be a satisfactory system for limited quantities of hospital refuse.

5. Transportation and landfill disposal of hospital refuse, modified by grinding and extruded with a binding agent into blocks and encapsulated, while minimizing hazards during transport and handling, is still subject to spreading contamination at the disposal site by rupture of the casing during compaction operations.

6. Transportation and landfill disposal of hospital refuse modified by grinding or pulping will reduce some hazards in handling at the disposal site but may cause the spread of contamination in transport and disposal.

7. Transportation and landfill disposal of baled or compacted hospital refuse, while lessening dangers to handlers, the material is subject to scavenging of hazardous reusable materials and the spread of contamination in transport and at the disposal site.

8. Transportation and landfill disposal of loose hospital refuse is dangerous to handlers and the public alike and is subject to scavenging of hazardous materials and the spread of contamination along the transport route and at the disposal site.

Of the eight methods of processing and disposal considered above, only four (Nos. 1-4) reasonably meet the established criteria and have sufficient qualifications to warrant consideration from an environmental point of view.

Of these four, only two (Nos. 2 and 3) fully meet the established criteria, wherein incineration and sterilization after pulping convert the wastes for safe off-site handling. Two additional methods, differing only slightly and both involving pulping, utilize the already contaminated sewers as the means of off-site transport. These methods would not contribute additional environmental contamination in transport and in principle also meet the criteria. Method No. 1 provides for further modifications of pulped solids by the wet oxidation process. This may be accomplished prior to discharge to sewers or at the sewage treatment plant by modification of treatment processes. In the latter case, the wet oxidation process would be handling the full range of solids presently encountered in addition to the pulped hospital waste loadings. Method No. 4 without further modification of pulped solids prior to discharge to the sewers or without modification of sewage treatment processes would burden the treatment plants with the quantitative increase in contaminated solid materials these plants will handle.

Methods 5 and 6, while not reducing dangers from contamination, do reduce hazards in handling, eliminate scavenging and are a considerable improvement over present off-site handling methods. Such processes could be considered on an interim basis until such time as the system could be further upgraded.

Effect on Community:

In evaluation of these processing and disposal methods, the magnitude of the total hospital waste problem in the community must be weighed and related to in-plant environment and the environment of the community at large. For example, in Los Angeles County, some 580 hospitals and nursing homes have a potential daily generation of about 470,000 pounds or 235 tons of disposable wastes. This quantity of materials is presently handled at the respective institutions daily and disposed of by incineration or transported to landfills for disposal.

In addition to the problems of in-plant handling, potential hazards to the community exist in the off-site handling of this material. No conclusive research directly related to off-site disposal of hospital wastes and its effect on the community has been performed. Principal concerns of health authorities relata to the possible survival of pathogenic microorganisms and their subsequent transmission by direct human contact with contaminated materials or through insects or rodents, as well as transmission through air and water pollution. Off-site disposal conventionally involves a method of highway transport, direct or via transfer stations to landfills or other disposal facilities. The community environment may be exposed to hospital waste contaminants throughout the course of travel with greatest potential exposure occurring at the disposal site where direct contact by refuse workers and scavengers may occur or where water pollution via runoff or leaching may ultimately occur.

Although incineration is one of the most effective methods, its continuing use cannot be recommended in this area because of the severe air pollution which already exists under certain atmospheric conditions.

Considering pulping with discharge to sewers as an alternative, a potential loading of about 70% of this total daily generation of hospital wastes or 165 tons (dry weight) would be handled daily at the sewage treatment plants in Los Angeles, discounting moisture content and non-pulpable material. With conventional sewage treatment processes, the nature and quantity of these solids would in truth be a burden if all such materials were received and processed. However, with modifications of sewage treatment processes, adapting such methods as wet oxidarion, the total solids may be substantially reduced in quantity and handled at a much faster rate than conventional processes permit.

The solution for the total community problem in handling hospital wastes could be achieved if pulping or grinding with discharge to sewers can be proven feasible and accepted by local authorities. Hospitals, nursing homes, clinics, etc. where contaminated wastes are concentrated could utilize a recognized contaminated transport channel (the sewer) with disposal at limited and controlled locations (sewage treatment plants). Personnel at these plants are accustomed and trained in handling and processing such contaminated materials in a routine manner with reasonable safeguards to the community environment.

A concurrent research project conducted by the County of Los Angeles Health Department has investigated wet grinding of hospital wastes with discharge to sewers. This *research carried out during 1967-69 employed the use of small pilot grinder installations at selected local hospitals wherein selected hospital wastes were satisfactorily processed. The study concluded that such processing with subsequent discharge to sewers is a feasible and an appealing public health solution to a major community problem and suggested that more intensive research was warranted for this method of disposal.

---

*"Use of Wet Grinding Units for Disposal of Hospital Solid Wastes" - By Bernard S. Weintraub, Harvey D. Kern, Health Facilities Service Division, County of Los Angeles, Health Department, Aug. 1969 - Research Grant 110-224 Health Facilities Planning and Construction Service, U. S. Public Health Service

EVALUATION PROCEDURES - Environmental Aspects

The evaluation of the solid waste system modifications considered for those institutions under study follow the same procedures as were applied in the evaluation of existing systems. These procedures, utilizing a numerical rating method to identify and express deficiencies concerned with the environmental aspects of waste system operation were explained in the introductory section of this study (Volume I). This evaluation method was developed around the closed system concept, wherein the optimum standards of operation throughout the system permit handling, storage, processing and disposal of all wastes to be accomplished without exposure and without contributing additional environmental pollution. Such a system, receiving wastes at the point of generation and transporting this material to a final processing or disposal station would in theory not have an operating deficiency except possibly in the initial deposit or in the final disposal process. An analogy to this concept is the garbage grinder, receiving and processing food wastes generated in the kitchen, discharging these materials to sewers for transport with final processing and conversion of wastes at the sewage treatment plant.

Based on present technology and equipment in the development stage, it is doubtful that such systems capable of handling all hospital wastes (both reusables and disposables) will be devised and widely used in the foreseeable future.

Considered improvements which most nearly approach this concept, as qualified in the foregoing, have been limited to adaptation of the pneumatic conveyor system for transport of the majority of wastes and the four optional processing and disposal methods that reasonably meet the established criteria.

The comprehensive evaluation procedures (numerical ratings) involved in each of these considered systems for each institution involves 320 independent judgment values. Narrative review of each and every rating would be exhaustive to the reader and perhaps due to volume and repetition not too meaningful; therefore, the presentation of these evaluations will be made in tabular form only with limited narration. Tabular and graphic summaries will also show the comparison between the various systems at each institution supported by the appended numerical rating of each considered system.

Reference to the method of identification of those modified systems considered in the evaluations will be limited to ID numbers established as follows:

1 - Pneumatic Conveyor System, Pulping, Wet Grinders, Wet Oxidation, Discharge to Sewers

2 - Pneumatic Conveyor System, Incineration, Transport Residue to Landfill

3 - Pneumatic Conveyor System, Pulping, Wet Grinders, Wet Oxidation, Dewater, Transport to Landfill

4 - Pneumatic Conveyor System, Pulping, Discharge to Sewers

EVALUATION PROCEDURES - Economic Aspects

The economic evaluation of proposed solid waste system modifications at each of these institutions is also presented in summary form by tabular and graphic illustrations.

Net investment costs for installation of the modified systems will consider total costs of improvements, less salvage allowances for equipment used in the present system that may be retired. Cost allowances for additions or replacement of equipment in the existing system are also considered in the determination of the net investment.

Costs of the various system improvements were estimated based on cursory investigations of buildings, mechanical installations and site conditions, without benefit of the development of preliminary plans. Sizing of processing and/or disposal units were based on handling of the present quantities of wastes generated during a one shift operation on a seven day week basis. Expansion of disposal facilities and/or increasing number of shifts worked would be required to meet significant future increases in waste production. Manufacturers of various types of equipment were consulted in establishing budgeted costs of improvement. Depreciation costs (straight line basis) of the modified systems have been based on 10 to 25 year life of various elements of the systems.

Summaries have been prepared on each system identifying the tangible economic benefits (if any) to be derived from the implementation of the project, incorporating those direct operating benefits as noted, together with certain indirect benefits that accrue due to elimination of certain parts of the existing system. Direct operating benefits or advantages consider the direct effects of operational costs of the project, i.e. savings in labor and building areas released for other uses and the increase in costs of maintenance, materials and supplies and power or collectively, the gross savings or added cost of operation. Indirect benefits or non-operating advantages also consider annual savings in further depreciation of the existing system. In some cases, it will be noted that the considered improvements in systems will not reflect such benefits or economies but will, in fact, increase annual operating costs.

Certain intangible benefits with monetary value will also accrue as a result of operating the improved solid waste system. Improvement in sanitation, safety, security and esthetics may likely have an effect on the frequency of personal injury, accidents, illness of personnel, as well as patients throughout the plant and perhaps the greatest effect on those being associated with the direct handling of the waste materials. Similarly, limiting the exposure of wastes in transport and off-site disposal would likely have a beneficial effect on the community at large. Improvement in systems operation and these related environmental conditions should also tend to reduce the general cost of building maintenance and losses due to fire or other casualty. These improved systems using an isolated and specialized transport method will reduce congestion in building corridors, allowing more efficient performance of other service functions. Economic analysis of annual dollar savings that may accrue from these benefits would require a multitude of record statistics of plant operation that are not available and adequate bases of fact are not at hand to permit an intelligent detailed estimate. However, it is conceivable that collectively the intangible benefits could equal, if not exceed, the estimated value of tangible benefits.

In addition to the four basic systems (Nos. 1-4) considered as meeting the established criteria, for cost comparison purposes only the following additional systems are shown in the economic evaluation:

5 - Pneumatic Conveyor System, Pulping or Wet Grinding, Extrude, Transport to Landfill

6 - Pneumatic Conveyor System, Shredding, Transport to Landfill

7 - Pneumatic Conveyor System, Pulping or Wet Grinding, Dewater, Transport to Landfill

8 - Pneumatic Conveyor System, Stationary Compactor, Transport to Landfill

9 - Pneumatic Conveyor System, Packer Truck, Transport to Landfill

LAC-USC MEDICAL CENTER

The evaluation of those system modifications described in the foregoing, and the overall effect of those modifications on the solid waste system operation at the LAC-USC Medical Center are summarized in the following group of illustrations:

Table III-1	Percentage Deficiencies of Sub-System Functions
Figure III-1	Comparison of System Deficiencies
Table III-2	Comparison of Project Costs
Table III-3	Economic Evaluation of Solid Waste System Modifications
Figure III-2	Comparison of Economic Desirability of Systems

Table III-1 shows percentage deficiencies of sub-system functions within each modified system and the comparison to deficiencies of the existing system. Figure III-1 graphically illustrates these comparisons. These illustrations are summarized from the detailed numerical ratings of each modified system included as Appendix B (pages b-1 and b-2). It will be noted that variations in deficiencies of the modified systems occur only in the functions of on-site central processing or disposal and the off-site system. Substantial decreases of present deficiencies in the handling system operation are expected to be accomplished with the pneumatic conveyor system. The remaining deficiencies are largely associated with those reusables (patient and food service items) not entering the modified system, as well as the initial handling of nearly all items in the unit system prior to entering the modified portions of the system. In the case of the latter, further reduction of deficiencies in operation are likely to come about only through enforcement of policies and closer supervision and not through mechanization in the foreseeable future.

Estimated costs of the various systems are illustrated in Table III-2. It will be noted that approximate costs of the pneumatic system are constant in all systems with variations occurring only in the processing and disposal elements. Estimated daily labor costs for each of the modified systems shown in Appendix B (pages b-3, b-4 and b-5) provide detail on classifications of labor distributed to various categories of wastes within the sub-systems. These may be compared to estimated daily labor costs of the existing system (Table II-13, Page II-41, Volume II). Principal economies, occurring in the Unit, Inter-Unit and Inter-Building systems as a direct result of the pneumatic system, are constant in the labor estimates of each modified system. Variations in labor between the modified systems occur only with the differing requirements of processing and disposal methods.

Economic evaluation of the various modified systems is summarized in Table III-3, showing net investment requirements, direct annual operating advantages (gross savings) and indirect or non-operating annual advantages (savings accruing from elimination of certain parts of the existing system). Calculations of the annual return on the investment after depreciation is shown in dollars and the percentage return is expressed as the "desirability rating". Figure III-2 graphically illustrates the comparison of desirability ratings. In comparison between systems, the higher the return, the greater the "economic desirability" of the investment. It is emphasized that this analysis does not consider the cost of funding such improvements and the rate of return (desirability rating) shown should be compared to existing interest rates available and average annual interest rate applicable to the respective investments.

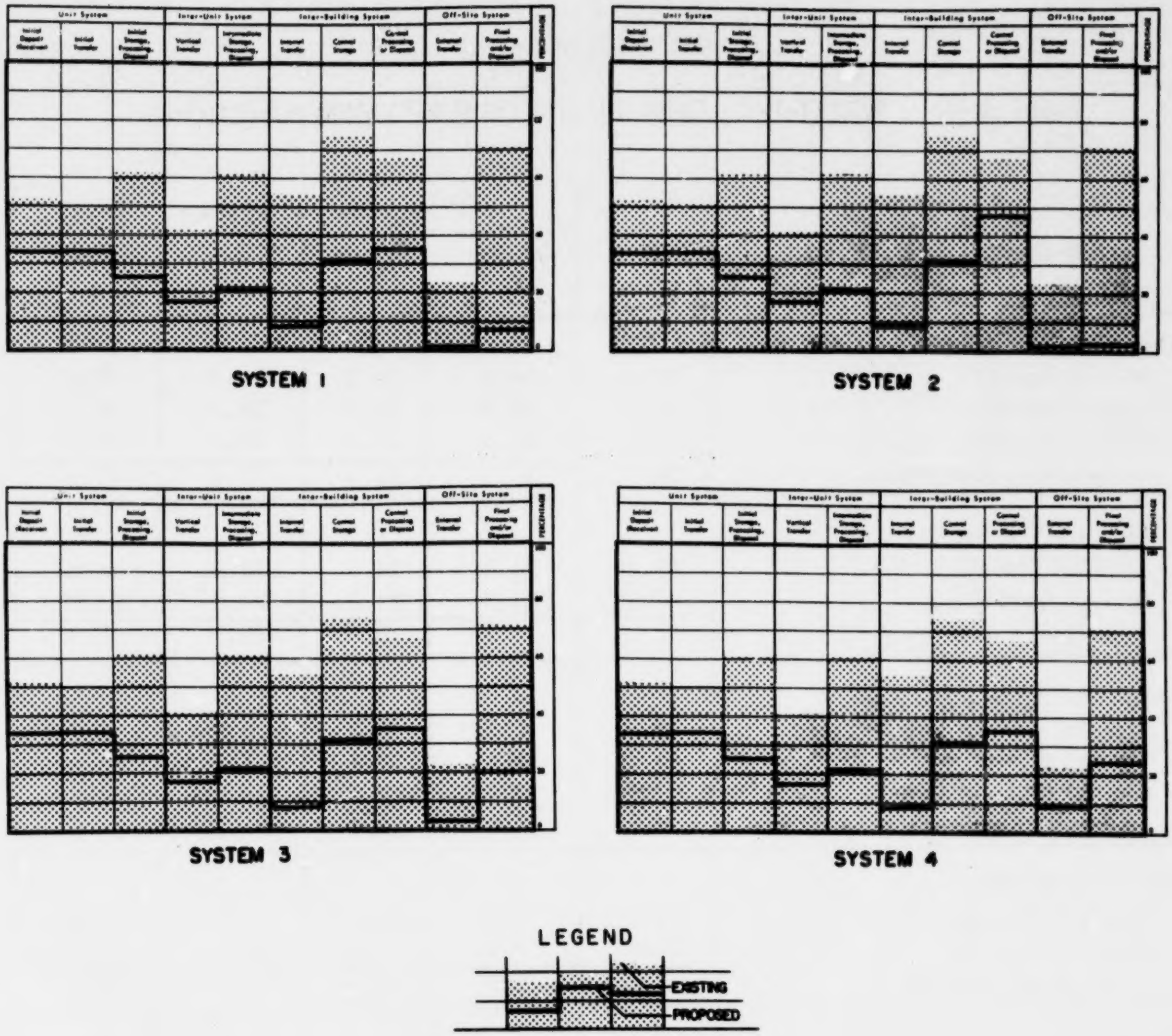
Investment requirements of the four systems considered (systems 1-4) with processing and disposal methods which meet the established criteria range from $1,932,000 to $2,317,000. The indicated annual return on required investments range from 16% to 22%. The range in system improvements indicates the deficiencies of the existing system may be decreased by 58% - 65% with major improvements at nearly all levels of operation.

Comparison of Hospital Solid Waste Systems

LAC-USC Medical Center

TABLE III-1 PERCENTAGE DEFICIENCIES OF SUB-SYSTEM FUNCTIONS

Sub-System and Function	Existing System	Improved Systems System 1	System 2	System 3	System 4
UNIT SYSTEM:					
Initial Deposit	52.3	34.0	34.0	34.0	34.0
Initial Transfer	50.5	34.3	34.3	34.3	34.3
Initial Storage	62.1	25.3	25.3	25.3	25.3
Weighted Average	55.0	31.1	31.1	31.1	31.1
INTER-UNIT SYSTEM:					
Vertical Transfer	41.2	16.6	16.6	16.6	16.6
Intermediate Storage	62.2	21.3	21.3	21.3	21.3
Weighted Average	52.0	19.1	19.1	19.1	19.1
INTER-BUILDING SYSTEM:					
Internal Transfer	54.9	8.3	8.3	8.3	8.3
Central Storage	74.8	31.4	31.4	31.4	31.4
Central Proc. or Disp.	67.4	34.8	47.1	34.8	34.8
Weighted Average	68.0	24.8	29.1	24.8	24.8
OFF-SITE SYSTEM:					
External Transfer	23.3	1.5	1.8	3.3	9.1
Final Proc. or Disp.	71.8	7.1	2.6	20.0	24.3
Weighted Average	60.0	5.7	2.4	15.9	20.5
TOTAL SYSTEM	58.0	20.6	20.8	23.2	24.4
% DECREASE OF DEFICIENCIES	--	64.7	64.3	60.2	58.1



SYSTEM 1

SYSTEM 2

SYSTEM 3

SYSTEM 4

LEGEND

FIGURE III-1 COMPARISON OF SYSTEM DEFICIENCIES
LAC-USC Medical Center

TABLE III-2 COMPARISON OF PROJECT COSTS

LAC-USC Medical Center

SYSTEM	SYSTEM COMPONENT	INSTALLED COSTS	ESTIMATED LIFE (YEARS)	DEPRECIATION
1	Vacuum Tube	$1,600,000	25	$ 64,000
	Grinders	200,000	10	20,000
	Building	210,000	25	8,400
	Wet Oxidation	360,000	25	14,400
	Total	$2,370,000		$106,800
2	Vacuum Tube	$1,600,000	25	$ 64,000
	Incinerator	750,000	25	30,000
	Total	$2,350,000		$ 94,000
3	Vacuum Tube	$1,600,000	25	$ 64,000
	Grinders	200,000	10	20,000
	Building	210,000	25	8,400
	Wet Oxidation	360,000	25	14,400
	Truck	25,000	10	2,500
	Total	$2,395,000		$109,300
4	Vacuum Tube	$1,600,000	25	$ 64,000
	Grinder	200,000	10	20,000
	Building	210,000	25	8,400
	Total	$2,010,000		$ 92,400
5	Vacuum Tube	$1,600,000	25	$ 64,000
	Grinders	200,000	10	20,000
	Building	210,000	25	8,400
	Extruders	90,000	10	9,000
	Truck	25,000	10	2,500
	Total	$2,125,000		$103,900
6	Vacuum Tube	$1,600,000	25	$ 64,000
	Shred	220,000	10	22,000
	Building	210,000	25	8,400
	Truck	25,000	10	2,500
	Total	$2,035,000		$ 96,900
7	Vacuum Tube	$1,600,000	25	$ 64,000
	Grinders	200,000	10	20,000
	Dewater	55,000	10	5,500
	Building	210,000	25	8,400
	Truck	25,000	10	2,500
	Total	$2,090,000		$100,400
8	Vacuum Tube	$1,600,000	25	$ 64,000
	Compactor	30,000	10	3,000
	Containers	24,000	25	1,000
	Building	150,000	25	6,000
	Equipment	75,000	25	3,000
	Total	$1,879,000		$ 77,000
9	Vacuum Tube	$1,600,000	25	$ 64,000
	Trucks	80,000	10	8,000
	Building	150,000	25	6,000
	Equipment	75,000	25	3,000
	Total	$1,905,000		$ 81,000

TABLE III-3 ECONOMIC EVALUATION OF SOLID WASTE SYSTEM MODIFICATIONS

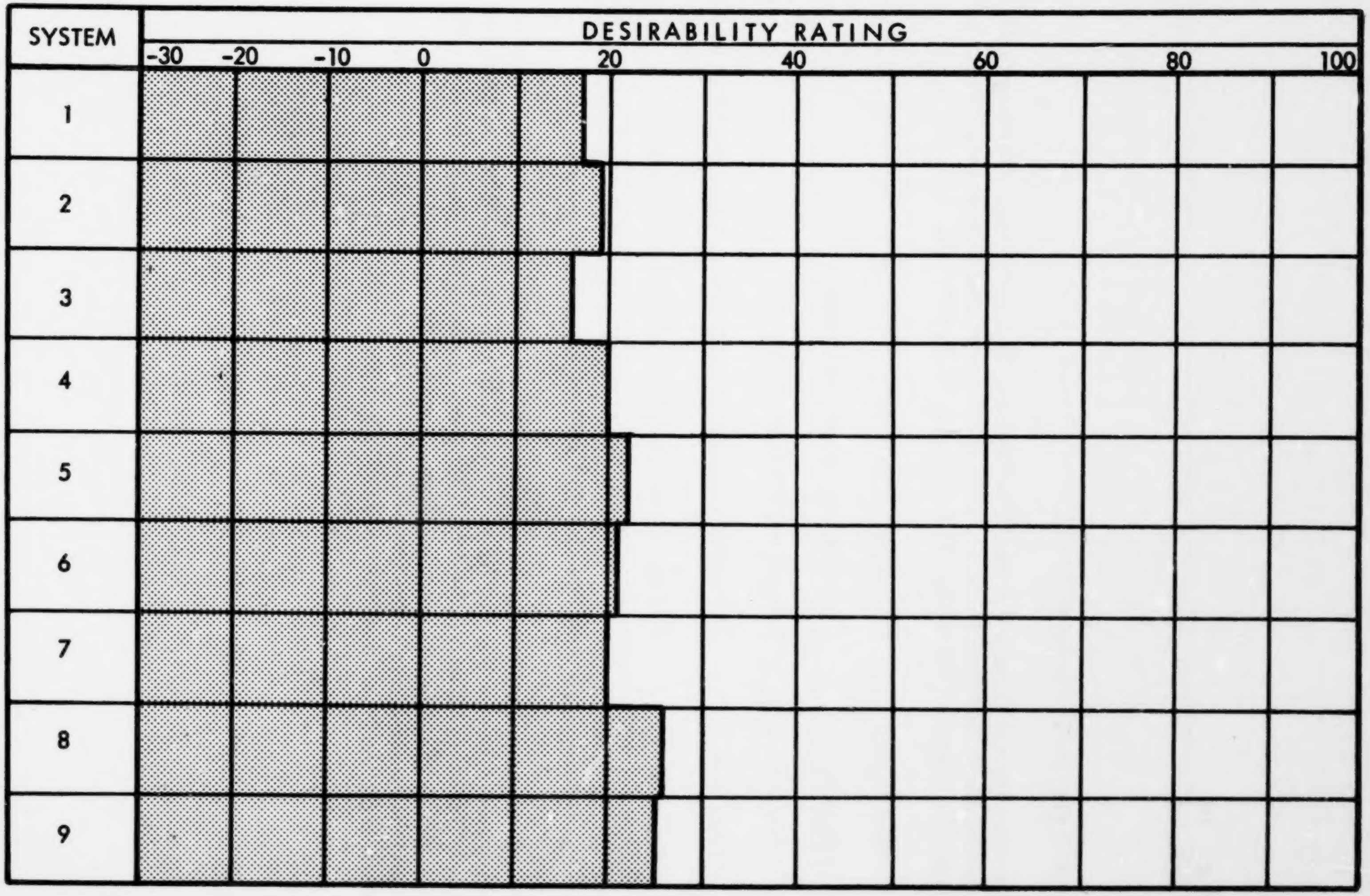
LAC-USC Medical Center

	S Y S T E M S																	
	1		2		3		4		5		6		7		8		9	
I INVESTMENT																		
Installed Cost of Project		$2,370,000		$2,350,000		$2,395,000		$2,010,000		$2,125,000		$2,035,000		$2,090,000		$1,879,000		$1,905,000
Disposal Value of Assets Retired by Project	$ 28,000		$ 28,000		$ 28,000		$ 28,000		$ 28,000		$ 28,000		$ 28,000		$ 28,000		$ 28,000	
Capital Additions in Absence of Project	50,000		50,000		50,000		56,000		50,000		50,000		50,000		50,000		50,000	
Investment Released or Avoided by Project		78,000		78,000		78,000		78,000		78,000		78,000		78,000		78,000		78,000
Net Investment Required		$2,292,000		$2,272,000		$2,317,000		$1,932,000		$2,047,000		$1,957,000		$2,012,000		$1,801,000		$1,827,000
II NON-OPERATING ADVANTAGE																		
Decline of Present System Disposal Value	$ 2,800		$ 2,800		$ 2,800		$ 2,800		$ 2,800		$ 2,800		$ 2,800		$ 2,800		$ 2,800	
Depreciation on Capital Additions Avoided	5,000		5,000		5,000		5,000		5,000		5,000		5,000		5,000		5,000	
Total Non-Operating Advantage		$ 7,800		$ 7,800		$ 7,800		$ 7,800		$ 7,800		$ 7,800		$ 7,800		$ 7,800		$ 7,800
III OPERATING ADVANTAGE																		
DIRECT EFFECT OF PROJECT	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease
Labor		$ 541,650		$ 540,000		$ 528,100		$ 541,650		$ 541,650		$ 528,100		$ 528,100		$ 559,000		$ 545,400
Maintenance	$ 3,900		$ 1,175		$ 4,100		$ 2,950		$ 4,400		$ 2,950		$ 3,300		$ 1,000		$ 2,000	
Materials and Supplies	5,000		3,000		5,000		3,500		5,000		5,000		4,000		2,000		2,000	
Power	47,600		24,400		48,700		22,500		31,300		22,500		24,000		18,500		20,000	
Floor Space		$ 3,100		$ 3,100		$ 3,100		$ 3,100		$ 3,100		$ 3,100		$ 3,100		$ 3,100		$ 3,100
Net Increase or Decrease in Operating Costs		$ 488,250		$ 514,525		$ 473,400		$ 515,800		$ 504,050		$ 500,750		$ 499,900		$ 540,600		$ 524,500
IV COMPUTATION OF DESIRABILITY RATING																		
Total Advantage	$496,050		$522,325		$481,200		$523,600		$511,850		$508,550		$507,700		$548,400		$532,300	
Depreciation	106,800		94,000		109,300		92,400		103,900		96,900		100,400		77,000		81,000	
Return on Investment	389,250		428,325		371,900		431,200		407,950		411,650		407,300		471,400		451,300	
Desirability Rating	17		19		16		22		20		21		20		26		25	

Note: Term "Desirability Rating" is synonymous with percent of return on investment.

FIGURE III-2 COMPARISON OF ECONOMIC DESIRABILITY OF SYSTEMS

LAC-USC Medical Center



Note: Term "Desirability Rating" is synonymous with percent of return on investment.

LONG BEACH GENERAL HOSPITAL

The evaluation of those system modifications described previously, and the overall effect of those modifications on the solid waste system operation at Long Beach General Hospital are summarized in the following group of illustrations:

Table III-4	Percentage Deficiencies of Sub-System Functions
Figure III-3	Comparison of System Deficiencies
Table III-5	Comparison of Project Costs
Table III-6	Economic Evaluation of Solid Waste System Modifications
Figure III-4	Comparison of Economic Desirability of Systems

For supporting detail, the reader is referred to Appendix C, which includes numerical ratings and estimated daily labor costs of each of the modified systems.

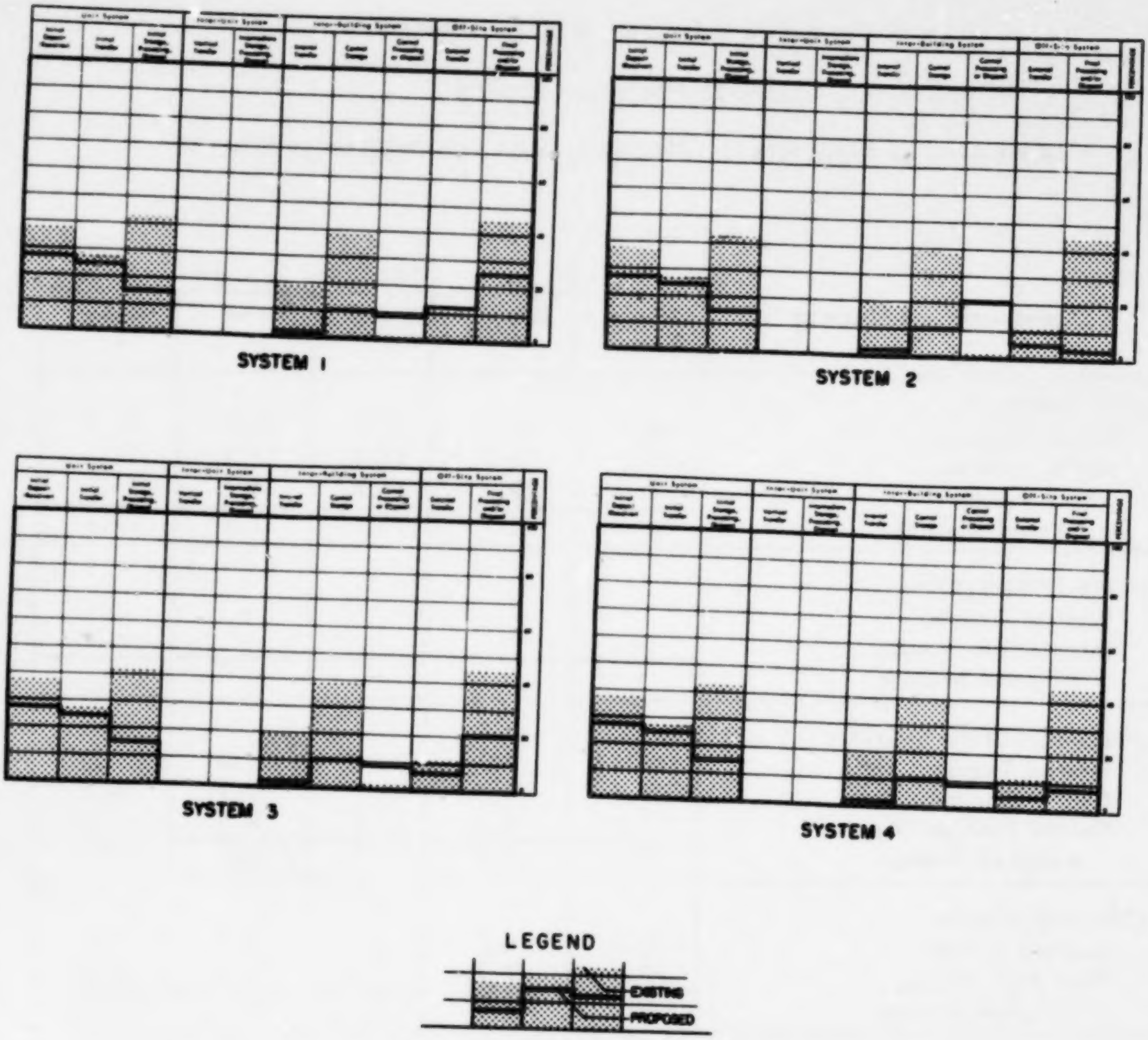
Review of these illustrations indicates investment requirements of the four systems considered that meet the established criteria will range from $495,000 to $645,000. The indicated increase in annual costs for these system improvements will range from $21,500 to $53,400 per year. The range in system improvements indicates the deficiencies of existing system operation may be decreased by 45% - 60% with major improvement at nearly all levels of operation.

Comparison of Hospital Solid Waste Systems

Long Beach General Hospital

TABLE III-4 PERCENTAGE DEFICIENCIES OF SUB-SYSTEM FUNCTIONS

Sub-System and Function	Existing System	Improved Systems			
		System 1	System 2	System 3	System 4
UNIT SYSTEM:					
Initial Deposit	38.1	27.0	27.0	27.0	27.0
Initial Transfer	27.6	24.3	24.3	24.3	24.3
Initial Storage	43.0	14.7	14.7	14.7	14.7
Weighted Average	36.0	21.9	21.9	21.9	21.9
INTER-UNIT SYSTEM:					
Vertical Transfer	-	-	-	-	-
Intermediate Storage	-	-	-	-	-
Weighted Average	-	-	-	-	-
INTER-BUILDING SYSTEM:					
Internal Transfer	19.4	2.0	2.0	2.0	2.0
Central Storage	39.4	10.2	10.2	10.2	10.2
Central Proc. or Disp.	.5	8.5	20.8	8.5	8.5
Weighted Average	19.0	6.8	11.2	6.8	6.8
OFF-SITE SYSTEM:					
External Transfer	11.3	4.7	5.1	6.5	12.4
Final Proc. or Disp.	45.1	7.7	3.2	20.6	24.9
Weighted Average	37.0	7.0	3.7	17.1	21.8
TOTAL SYSTEM	25.0	9.9	10.1	12.5	13.7
% DECREASE OF DEFICIENCIES	--	60.1	59.3	49.5	44.6



SYSTEM 1

SYSTEM 2

SYSTEM 3

SYSTEM 4

FIGURE III-3 COMPARISON OF SYSTEM DEFICIENCIES
Long Beach General Hospital

TABLE III-5 COMPARISON OF PROJECT COSTS

Long Beach General Hospital

SYSTEM	SYSTEM COMPONENT	INSTALLED COSTS	ESTIMATED LIFE (YEARS)	DEPRECIATION
1	Vacuum Tube	$375,000	25	$15,000
	Grinders	60,000	10	6,000
	Building	60,000	25	2,400
	Wet Oxidation	150,000	25	6,000
	Total	$645,000		$29,400
2	Vacuum Tube	$375,000	25	$15,000
	Incinerator	125,000	25	5,000
	Total	$500,000		$20,000
3	Vacuum Tube	$375,000	25	$15,000
	Grinders	60,000	10	6,000
	Building	60,000	25	2,400
	Wet Oxidation	150,000	25	6,000
	Truck	20,000	10	2,000
	Total	$647,000		$31,400
4	Vacuum Tube	$375,000	25	$15,000
	Grinder	60,000	10	6,000
	Building	60,000	25	2,400
	Total	$495,000		$23,400
5	Vacuum Tube	$375,000	25	$15,000
	Grinders	60,000	10	6,000
	Building	60,000	25	2,400
	Extruders	35,000	10	3,500
	Truck	20,000	10	2,000
	Total	$550,000		$28,900
6	Vacuum Tube	$375,000	25	$15,000
	Shred	65,000	10	6,500
	Building	60,000	25	2,400
	Truck	20,000	10	2,000
	Total	$520,000		$25,900
7	Vacuum Tube	$375,000	25	$15,000
	Grinders	60,000	10	6,000
	Dewater	20,000	10	2,000
	Building	60,000	25	2,400
	Truck	20,000	10	2,000
	Total	$535,000		$27,400
8	Vacuum Tube	$375,000	25	$15,000
	Compactor	12,000	10	1,200
	Containers	4,000	25	160
	Building	60,000	25	2,400
	Equipment	20,000	25	800
	Total	$471,000		$19,560
9	Vacuum Tube	$375,000	25	$15,000
	Trucks	25,000	10	2,500
	Building	60,000	25	2,400
	Equipment	20,000	25	800
	Total	$480,000		$20,700

TABLE III-6 ECONOMIC EVALUATION OF SOLID WASTE SYSTEM MODIFICATIONS

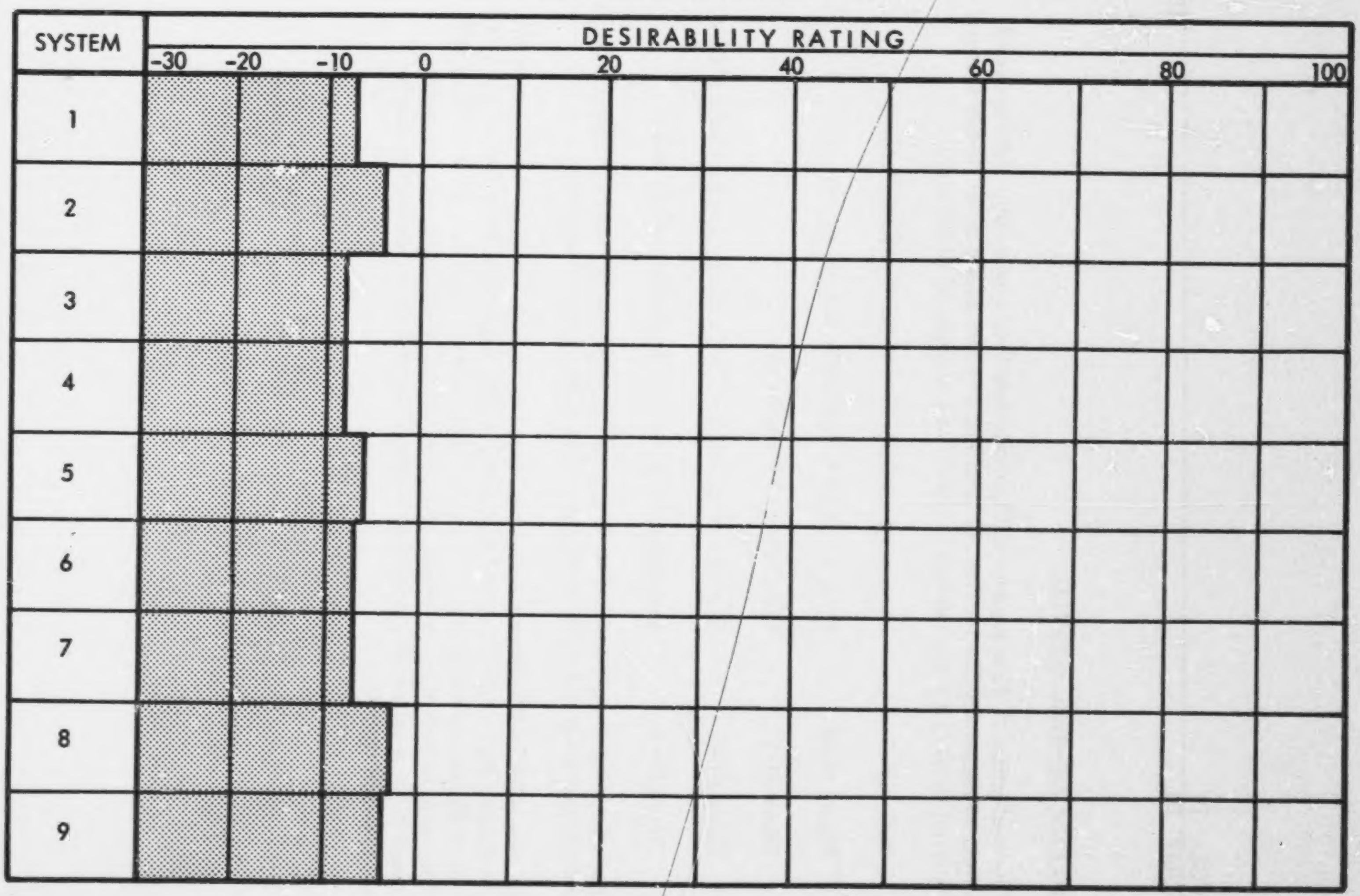
Long Beach General Hospital

	SYSTEMS																	
	1		2		3		4		5		6		7		8		9	
I INVESTMENT																		
Installed Cost of Project		$645,000		$500,000		$647,000		$495,000		$550,000		$520,000		$535,000		$471,000		$480,000
Disposal Value of Assets Retired by Project	--		--		--		--		--		--		--		--		--	
Capital Additions in Absence of Project	--		--		--		--		--		--		--		--		--	
Investment Released or Avoided by Project		--		--		--		--		--		--		--		--		--
Net Investment Required		$645,000		$500,000		$647,000		$495,000		$550,000		$520,000		$535,000		$471,000		$480,000
II NON-OPERATING ADVANTAGE																		
Decline of Present System Disposal Value	--		--		--		--		--		--		--		--		--	
Depreciation on Capital Additions Avoided	--		--		--		--		--		--		--		--		--	
Total Non-Operating Advantage		--		--		--		--		--		--		--		--		--
III OPERATING ADVANTAGE																		
DIRECT EFFECT OF PROJECT	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease
Labor		$ 7,800		$ 9,100		$ 2,000		$ 7,800		$ 7,800		$ 2,000		$ 2,000		$ 17,000		$ 11,200
Maintenance	$ 3,200		$ 2,500		$ 3,200		$ 2,500		$ 2,800		$ 2,600		$ 2,700		$ 2,400		$ 2,400	
Materials and Supplies	4,800		3,800		4,900		3,700		4,100		3,900		4,000		3,500		3,600	
Power	17,100		5,500		17,100		6,900		14,600		7,800		7,800		6,100		6,000	
Floor Space		$ 1,200		$ 1,200		$ 1,200		$ 1,200		$ 1,200		$ 1,200		$ 1,200		$ 1,200		$ 1,200
Net Increase or Decrease in Operating Costs	$-16,100		$- 1,500		$-22,000		$- 4,100		$-12,500		$-11,100		$-11,300			$ 6,200		$ 400
IV COMPUTATION OF DESIRABILITY RATING																		
Total Advantage	$-16,100		$- 1,500		$-22,000		$- 4,100		$-12,500		$-11,100		$-11,300		$ 6,200		$ 400	
Depreciation	29,400		20,000		31,400		23,400		28,900		25,900		27,400		19,560		20,700	
Return on Investment	-45,500		-21,500		-53,400		-27,500		-41,400		-37,000		-38,700		-13,360		-20,300	
Desirability Rating	-7		-4		-8		-6		-8		-7		-7		-3		-4	

Note: Term "Desirability Rating" is synonymous with percent of return on investment.

FIGURE III-4 COMPARISON OF ECONOMIC DESIRABILITY OF SYSTEMS

Long Beach General Hospital



Note: Term "Desirability Rating" is synonymous with percent of return on investment.

HARBOR GENERAL HOSPITAL

The evaluation of those system modifications described previously, and the overall effect of those modifications on the solid waste system operation at Harbor General Hospital (Unit I) are summarized in the following group of illustrations:

Table III-7	Percentage Deficiencies of Sub-System Functions
Figure III-5	Comparison of System Deficiencies
Table III-8	Comparison of Project Costs
Table III-9	Economic Evaluation of Solid Waste System Modifications
Figure III-6	Comparison of Economic Desirability of Systems

For supporting detail, the reader is referred to Appendix D, which includes numerical ratings and estimated daily labor costs of each of the modified systems.

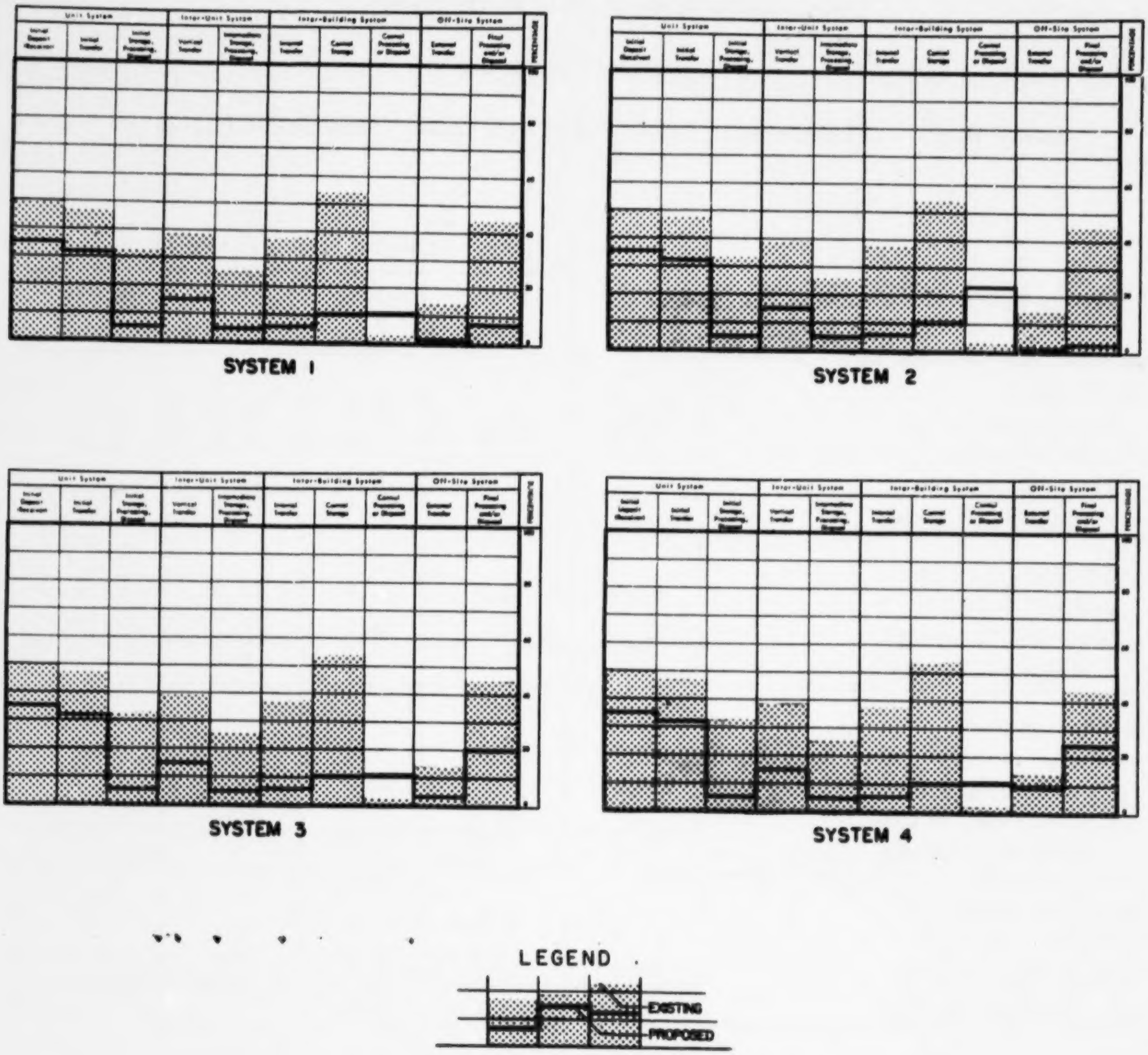
Review of these illustrations indicates investment requirements of the four systems considered that meet the established criteria will range from $498,000 to $718,000. The indicated annual return on the required investment will range from 5% to 15%. The range in system improvements indicates the deficiencies of existing system operation may be decreased by 55% - 66% with major improvement at nearly all levels of operation.

Comparison of Hospital Solid Waste Systems

Harbor General Hospital

TABLE III-7 PERCENTAGE DEFICIENCIES OF SUB-SYSTEM FUNCTIONS

Sub-System and Function	Existing System	Improved Systems			
		System 1	System 2	System 3	System 4
UNIT SYSTEM:					
Initial Deposit	50.8	35.2	35.2	35.2	35.2
Initial Transfer	47.6	31.9	31.9	31.9	31.9
Initial Storage	33.3	5.1	5.1	5.1	5.1
Weighted Average	44.0	23.9	23.9	23.9	23.9
INTER-UNIT SYSTEM:					
Vertical Transfer	38.8	14.9	14.9	14.9	14.9
Intermediate Storage	25.6	4.7	4.7	4.7	4.7
Weighted Average	32.0	9.5	9.5	9.5	9.5
INTER-BUILDING SYSTEM:					
Internal Transfer	37.7	5.7	5.7	5.7	5.7
Central Storage	54.8	10.2	10.2	10.2	10.2
Central Proc. or Disp.	2.7	10.7	23.1	10.7	10.7
Weighted Average	31.0	8.8	13.2	8.8	8.8
OFF-SITE SYSTEM:					
External Transfer	14.9	1.5	1.8	3.3	9.1
Final Proc. or Disp.	45.1	7.1	2.6	20.0	24.3
Weighted Average	38.0	5.7	2.4	15.9	20.5
TOTAL SYSTEM	37.0	12.6	12.8	15.2	16.4
% DECREASE OF DEFICIENCIES	--	65.6	65.1	58.4	55.1



SYSTEM 1

SYSTEM 2

SYSTEM 3

SYSTEM 4

FIGURE III-5 COMPARISON OF SYSTEM DEFICIENCIES
Harbor General Hospital

TABLE III-8 COMPARISON OF PROJECT COSTS

Harbor General Hospital

SYSTEM	SYSTEM COMPONENT	INSTALLED COSTS	ESTIMATED LIFE (YEARS)	DEPRECIATION
1	Vacuum Tube	$330,000	25	$13,200
	Grinders	75,000	10	7,500
	Building	100,000	25	4,000
	Wet Oxidation	200,000	25	8,000
	Total	$705,000		$32,700
2	Vacuum Tube	$330,000	25	$13,200
	Incinerator	250,000	25	10,000
	Total	$580,000		$23,200
3	Vacuum Tube	$330,000	25	$13,200
	Grinders	75,000	10	7,500
	Building	100,000	25	4,000
	Wet Oxidation	200,000	25	8,000
	Truck	20,000	10	2,000
	Total	$725,000		$34,700
4	Vacuum Tube	$330,000	25	$13,200
	Grinder	75,000	10	7,500
	Building	100,000	25	4,000
	Total	$505,000		$24,700
5	Vacuum Tube	$330,000	25	$13,200
	Grinders	75,000	10	7,500
	Building	100,000	25	4,000
	Extruders	50,000	10	5,000
	Truck	20,000	10	2,000
	Total	$575,000		$31,700
6	Vacuum Tube	$330,000	25	$13,200
	Shred	80,000	10	8,000
	Building	100,000	25	4,000
	Truck	20,000	10	2,000
	Total	$530,000		$27,200
7	Vacuum Tube	$330,000	25	$13,200
	Grinders	75,000	10	7,500
	Dewater	25,000	10	2,500
	Building	100,000	25	4,000
	Truck	20,000	10	2,000
	Total	$550,000		$29,200
8	Vacuum Tube	$330,000	25	$13,200
	Compactor	20,000	10	2,000
	Containers	8,000	25	320
	Building	100,000	25	4,000
	Equipment	30,000	25	1,200
	Total	$488,000		$20,720
9	Vacuum Tube	$330,000	25	$13,200
	Trucks	40,000	10	4,000
	Building	100,000	25	4,000
	Equipment	30,000	25	1,200
	Total	$500,000		$22,400

TABLE III-9 ECONOMIC EVALUATION OF SOLID WASTE SYSTEM MODIFICATIONS

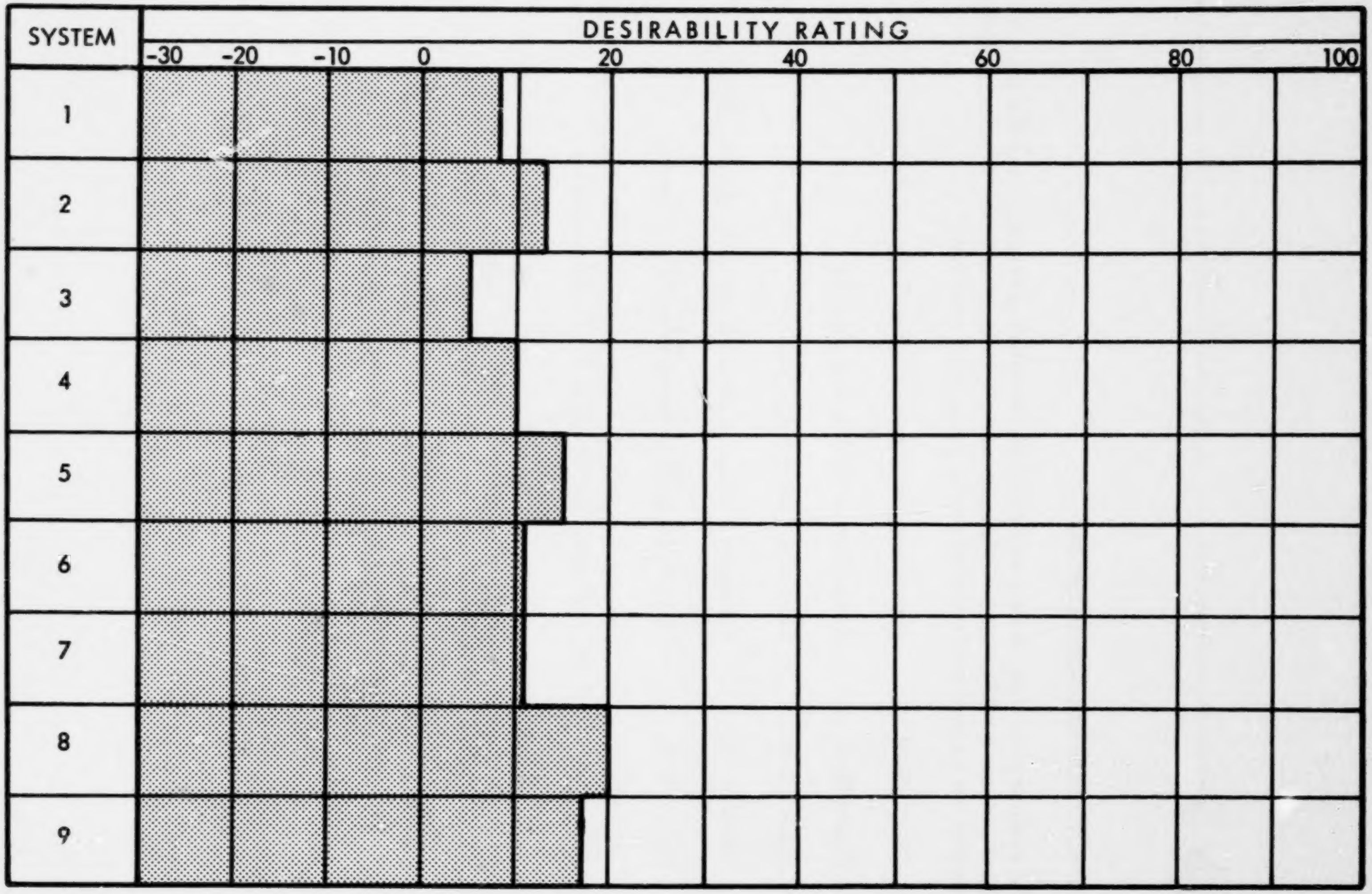
Harbor General Hospital

	S Y S T E M S																	
	1		2		3		4		5		6		7		8		9	
I INVESTMENT																		
Installed Cost of Project		$705,000		$580,000		$725,000		$505,000		$575,000		$530,000		$550,000		$488,000		$500,000
Disposal Value of Assets Retired by Project	$ 7,000		$ 7,000		$ 7,000		$ 7,000		$ 7,000		$ 7,000		$ 7,000		$ 7,000		$ 7,000	
Capital Additions in Absence of Project	--		--		--		--		--		--		--		--		--	
Investment Released or Avoided by Project		7,000		7,000		7,000		7,000		7,000		7,000		7,000		7,000		7,000
Net Investment Required		$698,000		$573,000		$718,000		$498,000		$568,000		$523,000		$543,000		$481,000		$493,000
II NON-OPERATING ADVANTAGE																		
Decline of Present System Disposal Value	$ 500		$ 500		$ 500		$ 500		$ 500		$ 500		$ 500		$ 500		$ 500	
Depreciation on Capital Additions Avoided	--		--		--		--		--		--		--		--		--	
Total Non-Operating Advantage		$ 500		$ 500		$ 500		$ 500		$ 500		$ 500		$ 500		$ 500		$ 500
III OPERATING ADVANTAGE																		
DIRECT EFFECT OF PROJECT	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease
Labor		$110,900		$108,400		$ 97,300		$110,900		$110,900		$ 97,300		$ 97,300		$128,200		$114,600
Maintenance	$ 3,500		$ 2,900		$ 3,600		$ 2,500		$ 2,900		$ 2,600		$ 2,700		$ 2,400		$ 2,500	
Materials and Supplies	5,300		4,400		5,400		3,800		4,300		4,000		4,100		3,700		3,800	
Power	16,600		5,400		17,600		5,700		17,600		6,700		6,700		5,900		5,200	
Floor Space		$ 1,400		$ 1,400		$ 1,400		$ 1,400		$ 1,400		$ 1,400		$ 1,400		$ 1,400		$ 1,400
Net Increase or Decrease in Operating Costs		$ 86,900		$ 97,100		$ 72,100		$100,300		$ 87,500		$ 85,400		$ 87,900		$117,600		$104,500
IV COMPUTATION OF DESIRABILITY RATING																		
Total Advantage	$ 87,400		$ 97,600		$ 72,600		$100,800		$ 88,000		$ 85,900		$ 88,400		$118,100		$105,000	
Depreciation	32,700		23,200		34,700		24,700		31,700		27,200		29,200		20,720		22,400	
Return on Investment	54,700		74,400		37,900		76,100		56,300		58,700		59,200		97,380		82,600	
Desirability Rating	8		13		5		15		10		11		11		20		17	

Note: Term "Desirability Rating" is synonymous with percent of return on investment.

FIGURE III-6 COMPARISON OF ECONOMIC DESIRABILITY OF SYSTEMS

Harbor General Hospital



Note: Term "Desirability Rating" is synonymous with percent of return on investment.

RANCHO LOS AMIGOS HOSPITAL

The evaluation of those system modifications described previously, and the overall effect of those modifications on the solid waste system operation at Rancho Los Amigos Hospital are summarized in the following group of illustrations:

Table III-10	Percentage Deficiencies of Sub-System Functions
Figure III-7	Comparison of System Deficiencies
Table III-11	Comparison of Project Costs
Table III-12	Economic Evaluation of Solid Waste System Modifications
Figure III-8	Comparison of Economic Desirability of Systems

For supporting detail, the reader is referred to Appendix E, which includes numerical ratings and estimated daily labor costs of each of the modified systems.

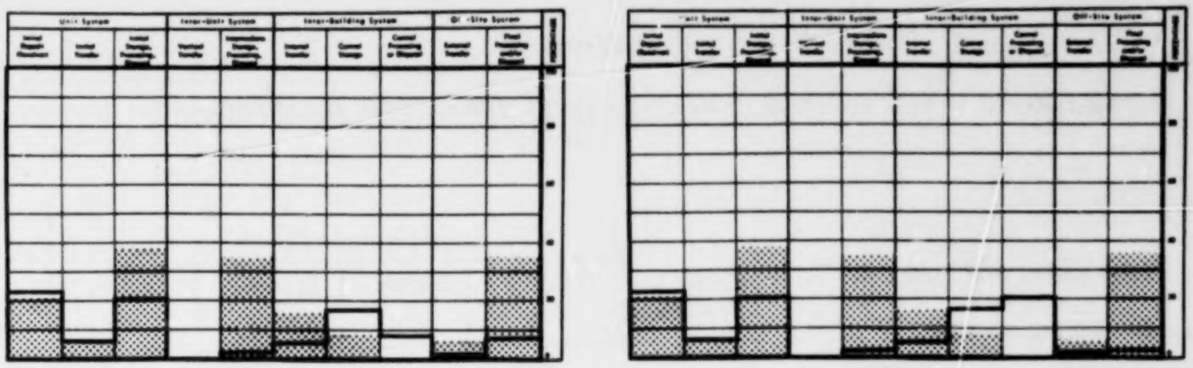
Review of these illustrations indicates investment requirements of the four systems considered that meet the established criteria will range from \$1,508,000 to \$1,759,000. The indicated increase in annual costs for these system improvements will range from \$22,200 to \$75,200 per year. The range in system improvements indicates the deficiencies of existing system operation may be decreased by 34% - 54% with major improvement at nearly all levels of operation.

Comparison of Hospital Solid Waste Systems

Rancho Los Amigos Hospital

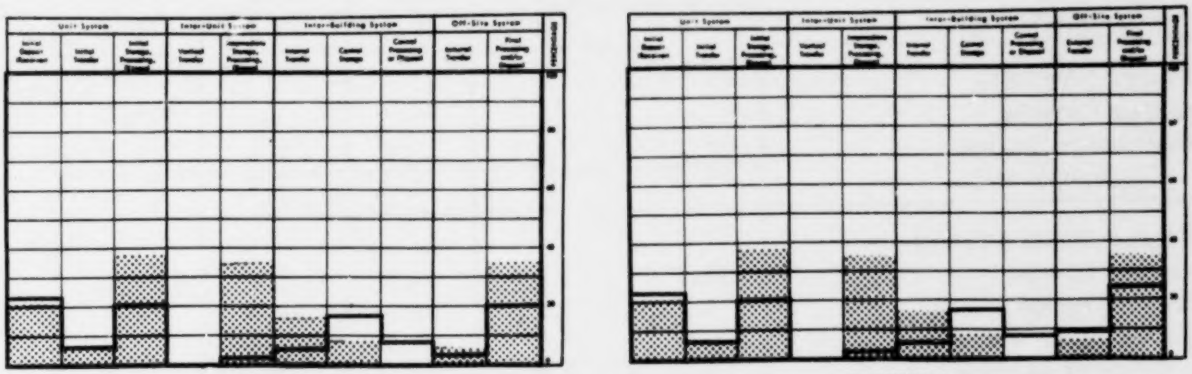
TABLE III-10 PERCENTAGE DEFICIENCIES OF SUB-SYSTEM FUNCTIONS

Sub-System and Function	Existing System	Improved Systems			
		System 1	System 2	System 3	System 4
UNIT SYSTEM:					
Initial Deposit	20.7	22.9	22.9	22.9	22.9
Initial Transfer	6.2	6.2	6.2	6.2	6.2
Initial Storage	37.9	20.2	20.2	20.2	20.2
Weighted Average	22.0	16.4	16.4	16.4	16.4
INTER-UNIT SYSTEM:					
Vertical Transfer	-	-	-	-	-
Intermediate Storage	35.5	2.4	2.4	2.4	2.4
Weighted Average	19.0	1.3	1.3	1.3	1.3
INTER-BUILDING SYSTEM:					
Internal Transfer	16.3	5.4	5.4	5.4	5.4
Central Storage	8.3	16.9	16.9	16.9	16.9
Central Proc. or Disp.	-0-	7.9	20.3	7.9	7.9
Weighted Average	8.0	9.9	14.2	9.9	9.9
OFF-SITE SYSTEM:					
External Transfer	6.2	1.5	1.8	3.3	9.1
Final Proc. or Disp.	35.6	7.1	2.6	20.0	24.3
Weighted Average	28.0	5.7	2.4	15.9	20.5
TOTAL SYSTEM	20.0	9.0	9.2	11.6	12.8
% DECREASE OF DEFICIENCIES	--	54.0	53.1	40.6	34.4



SYSTEM 1

SYSTEM 2



SYSTEM 3

SYSTEM 4

LEGEND

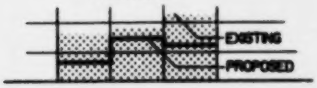

EXISTING
PROPOSED

FIGURE III-7 COMPARISON OF SYSTEM DEFICIENCIES
Rancho Los Amigos Hospital

TABLE III-11 COMPARISON OF PROJECT COSTS

Rancho Los Amigos Hospital

SYSTEM	SYSTEM COMPONENT	INSTALLED COSTS	ESTIMATED LIFE (YEARS)	DEPRECIATION
1	Vacuum Tube	$1,300,000	25	$52,000
	Grinders	90,000	10	9,000
	Building	125,000	25	5,000
	Wet Oxidation	225,000	25	9,000
	Total	$1,740,000		$75,000
2	Vacuum Tube	$1,300,000	25	$52,000
	Incinerator	375,000	25	15,000
	Total	$1,675,000		$67,000
3	Vacuum Tube	$1,300,000	25	$52,000
	Grinders	90,000	10	9,000
	Building	125,000	25	5,000
	Wet Oxidation	225,000	25	9,000
	Truck	20,000	10	2,000
	Total	$1,760,000		$77,000
4	Vacuum Tube	$1,300,000	25	$52,000
	Grinder	90,000	10	9,000
	Building	125,000	25	5,000
	Total	$1,515,000		$66,000
5	Vacuum Tube	$1,300,000	25	$52,000
	Grinders	90,000	10	9,000
	Building	125,000	25	5,000
	Extruders	50,000	10	5,000
	Truck	20,000	10	2,000
	Total	$1,585,000		$73,000
6	Vacuum Tube	$1,300,000	25	$52,000
	Shred	100,000	10	10,000
	Building	125,000	25	5,000
	Truck	20,000	10	2,000
	Total	$1,545,000		$69,000
7	Vacuum Tube	$1,300,000	25	$52,000
	Grinders	90,000	10	9,000
	Dewater	25,000	10	2,500
	Building	125,000	25	5,000
	Truck	20,000	10	2,000
	Total	$1,560,000		$70,500
8	Vacuum Tube	$1,300,000	25	$52,000
	Compactor	20,000	10	2,000
	Containers	8,000	25	320
	Building	125,000	25	5,000
	Equipment	40,000	25	1,600
	Total	$1,493,000		$60,920
9	Vacuum Tube	$1,300,000	25	$52,000
	Trucks	40,000	10	4,000
	Building	125,000	25	5,000
	Equipment	40,000	25	1,600
	Total	$1,505,000		$62,600

TABLE III-12 ECONOMIC EVALUATION OF SOLID WASTE SYSTEM MODIFICATIONS

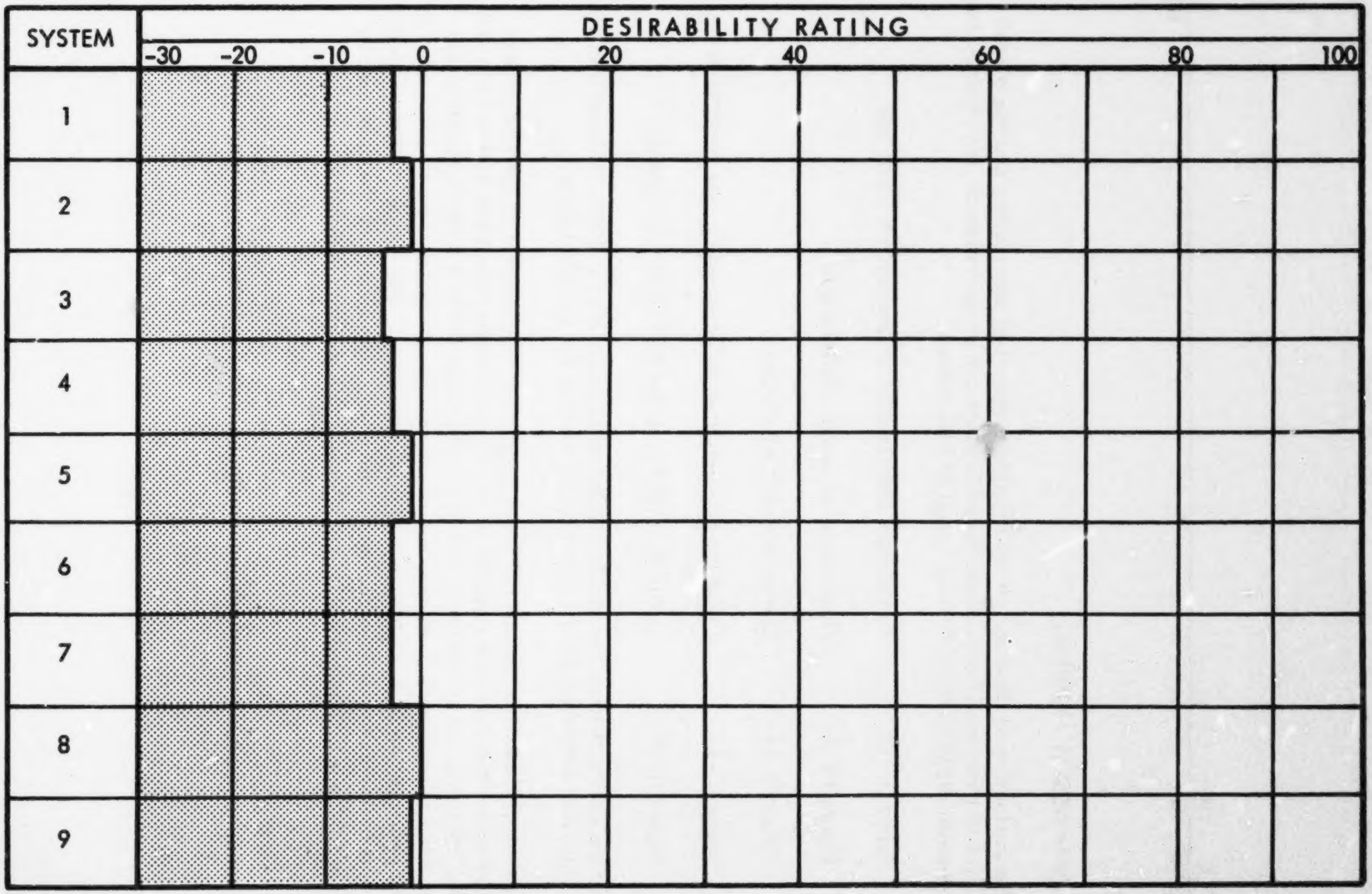
Rancho Los Amigos Hospital

	S	Y	S	T	E	M	S											
	1		2		3		4		5		6		7		8		9	
I INVESTMENT																		
Installed Cost of Project		$1,740,000		$1,675,000		$1,760,000		$1,515,000		$1,585,000		$1,545,000		$1,360,000		$1,493,000		$1,505,000
Disposal Value of Assets Retired by Project	$ 7,200		$ 7,200		$ 7,200		$ 7,200		$ 7,200		$ 7,200		$ 7,200		$ 7,200		$ 7,200	
Capital Additions in Absence of Project	--		--		--		--		--		--		--		--		--	
Investment Released or Avoided by Project		7,200		7,200		7,200		7,200		7,200		7,200		7,200		7,200		7,200
Net Investment Required		$1,732,800		$1,667,800		$1,752,800		$1,507,800		$1,577,800		$1,537,800		$1,352,800		$1,485,800		$1,497,800
II NON-OPERATING ADVANTAGE																		
Decline of Present System Disposal Value	$ 800		$ 800		$ 800		$ 800		$ 800		$ 800		$ 800		$ 800		$ 800	
Depreciation on Capital Additions Avoided	--		--		--		--		--		--		--		--		--	
Total Non-Operating Advantage		$ 800		$ 800		$ 800		$ 800		$ 800		$ 800		$ 800		$ 800		$ 800
III OPERATING ADVANTAGE																		
DIRECT EFFECT OF PROJECT	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease
Labor		$ 79,600		$ 78,000		$ 66,000		$ 79,600		$ 79,600		$ [illegible]		$ 66,000		$ 96,900		$ 83,200
Maintenance	$ 8,700		$ 8,400		$ 8,800		$ 7,600		$ 7,900		$ 7,700		$ 7,800		$ 7,500		$ 7,500	
Materials and Supplies	13,100		12,600		13,200		11,400		11,900		11,600		11,700		11,200		11,200	
Power	46,100		18,400		46,600		21,200		42,000		23,200		22,600		19,400		18,800	
Floor Space		$ 3,600		$ 3,600		$ 3,600		$ 3,600		$ 3,600		$ 3,600		$ 3,600		$ 3,600		$ 3,600
Net Increase or Decrease in Operating Costs		$ 15,300		$ 42,200		$ 1,000		$ 43,000		$ 21,400		$ 27,100		$ 27,500		$ 62,400		$ 49,300
IV COMPUTATION OF DESIRABILITY RATING																		
Total Advantage	$ 16,100		$ 43,000		$ 1,800		$ 43,800		$ 22,200		$ 27,900		$ 28,300		$ 63,200		$ 50,100	
Depreciation	75,000		67,000		77,000		66,000		73,000		69,000		70,500		60,920		62,600	
Return on Investment	-58,900		-24,000		-75,200		-22,200		-50,800		-41,100		-42,200		2,280		-12,500	
Desirability Rating	-3		-1		-4		-1		-3		-3		-3		0		-1	

Note: Term "Desirability Rating" is synonymous with percent of return on investment.

FIGURE III-8 COMPARISON OF ECONOMIC DESIRABILITY OF SYSTEMS

Rancho Los Amigos Hospital



Note: Term "Desirability Rating" is synonymous with percent of return on investment.

JOHN WESLEY HOSPITAL

The evaluation of those system modifications described previously, and the overall effect of those modifications on the solid waste system operation at John Wesley Hospital are summarized in the following group of illustrations:

Table III-13	Percentage Deficiencies of Sub-System Functions
Figure III-9	Comparison of System Deficiencies
Table III-14	Comparison of Project Costs
Table III-15	Economic Evaluation of Solid Waste System Modifications
Figure III-10	Comparison of Economic Desirability of Systems

For supporting detail, the reader is referred to Appendix F, which includes numerical ratings and estimated daily labor costs of each of the modified systems.

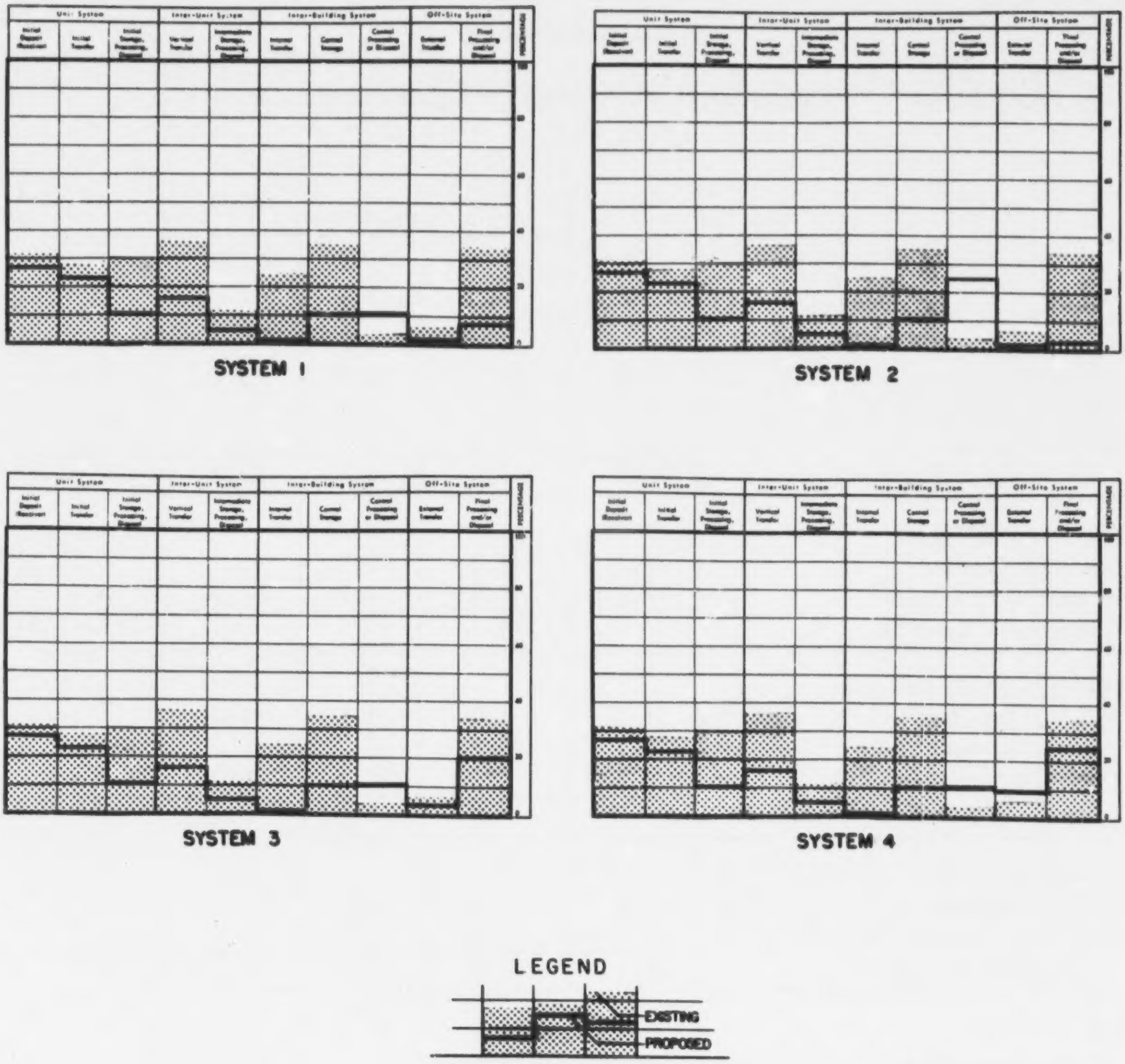
Review of these illustrations indicates investment requirements of the four systems considered that meet the established criteria will range from \$444,800 to \$614,800. The indicated annual return on the required investment will range upwards to 5% on three of the systems. In the case of System No. 3, an increase of about \$6,100 per year over present annual costs could be expected. The range in system improvements indicates the deficiencies of existing system operation may be decreased by 42% - 57% with major improvement at nearly all levels of operation.

Comparison of Hospital Solid Waste Systems

John Wesley Hospital

TABLE III-13 PERCENTAGE DEFICIENCIES OF SUB-SYSTEM FUNCTIONS

Sub-System and Function	Existing System	Improved Systems System 1	System 2	System 3	System 4
UNIT SYSTEM:					
Initial Deposit	31.8	26.7	26.7	26.7	26.7
Initial Transfer	27.9	22.6	22.6	22.6	22.6
Initial Storage	30.2	10.2	10.2	10.2	10.2
Weighted Average	30.0	19.8	19.8	19.8	19.8
INTER-UNIT SYSTEM:					
Vertical Transfer	36.6	15.9	15.9	15.9	15.9
Intermediate Storage	11.8	4.9	4.9	4.9	4.9
Weighted Average	24.0	10.1	10.1	10.1	10.1
INTER-BUILDING SYSTEM:					
Internal Transfer	24.6	1.1	1.1	1.1	1.1
Central Storage	35.1	10.2	10.2	10.2	10.2
Central Proc. or Disp.	4.1	10.7	24.7	10.7	10.7
Weighted Average	21.0	7.3	12.2	7.3	7.3
OFF-SITE SYSTEM:					
External Transfer	6.2	1.5	1.8	3.3	9.1
Final Proc. or Disp.	34.9	7.1	2.6	20.0	24.3
Weighted Average	28.0	5.8	2.4	15.9	20.5
TOTAL SYSTEM	26.0	11.1	11.5	13.8	15.0
% DECREASE OF DEFICIENCIES	--	56.9	55.6	46.7	42.0



SYSTEM 1

SYSTEM 2

SYSTEM 3

SYSTEM 4

FIGURE III-9 COMPARISON OF SYSTEM DEFICIENCIES
John Wesley Hospital

TABLE III-14 COMPARISON OF PROJECT COSTS

John Wesley Hospital

SYSTEM	SYSTEM COMPONENT	INSTALLED COSTS	ESTIMATED LIFE (YEARS)	DEPRECIATION
1	Vacuum Tube	$350,000	25	$14,000
	Grinders	50,000	10	5,000
	Building	60,000	25	2,400
	Wet Oxidation	150,000	25	6,000
	Total	$610,000		$27,400
2	Vacuum Tube	$350,000	25	$14,000
	Incinerator	125,000	25	5,000
	Total	$475,000		$19,000
3	Vacuum Tube	$350,000	25	$14,000
	Grinders	50,000	10	5,000
	Building	60,000	25	2,400
	Wet Oxidation	150,000	25	6,000
	Truck	20,000	10	2,000
	Total	$630,000		$29,400
4	Vacuum Tube	$350,000	25	$14,000
	Grinder	50,000	10	5,000
	Building	60,000	25	2,400
	Total	$460,000		$21,400
5	Vacuum Tube	$350,000	25	$14,000
	Grinders	50,000	10	5,000
	Building	60,000	25	2,400
	Extruders	30,000	10	3,000
	Truck	20,000	10	2,000
	Total	$510,000		$26,400
6	Vacuum Tube	$350,000	25	$14,000
	Shred	55,000	10	5,500
	Building	60,000	25	2,400
	Truck	20,000	10	2,000
	Total	$485,000		$23,900
7	Vacuum Tube	$350,000	25	$14,000
	Grinders	50,000	10	5,000
	Dewater	15,000	10	1,500
	Building	60,000	25	2,400
	Truck	20,000	10	2,000
	Total	$495,000		$24,900
8	Vacuum Tube	$350,000	25	$14,000
	Compactor	12,000	10	1,200
	Containers	4,000	25	160
	Building	60,000	25	2,400
	Equipment	20,000	25	800
	Total	$446,000		$18,560
9	Vacuum Tube	$350,000	25	$14,000
	Trucks	25,000	10	2,500
	Building	60,000	25	2,400
	Equipment	20,000	25	800
	Total	$455,000		$19,700

TABLE III-15 ECONOMIC EVALUATION OF SOLID WASTE SYSTEM MODIFICATIONS

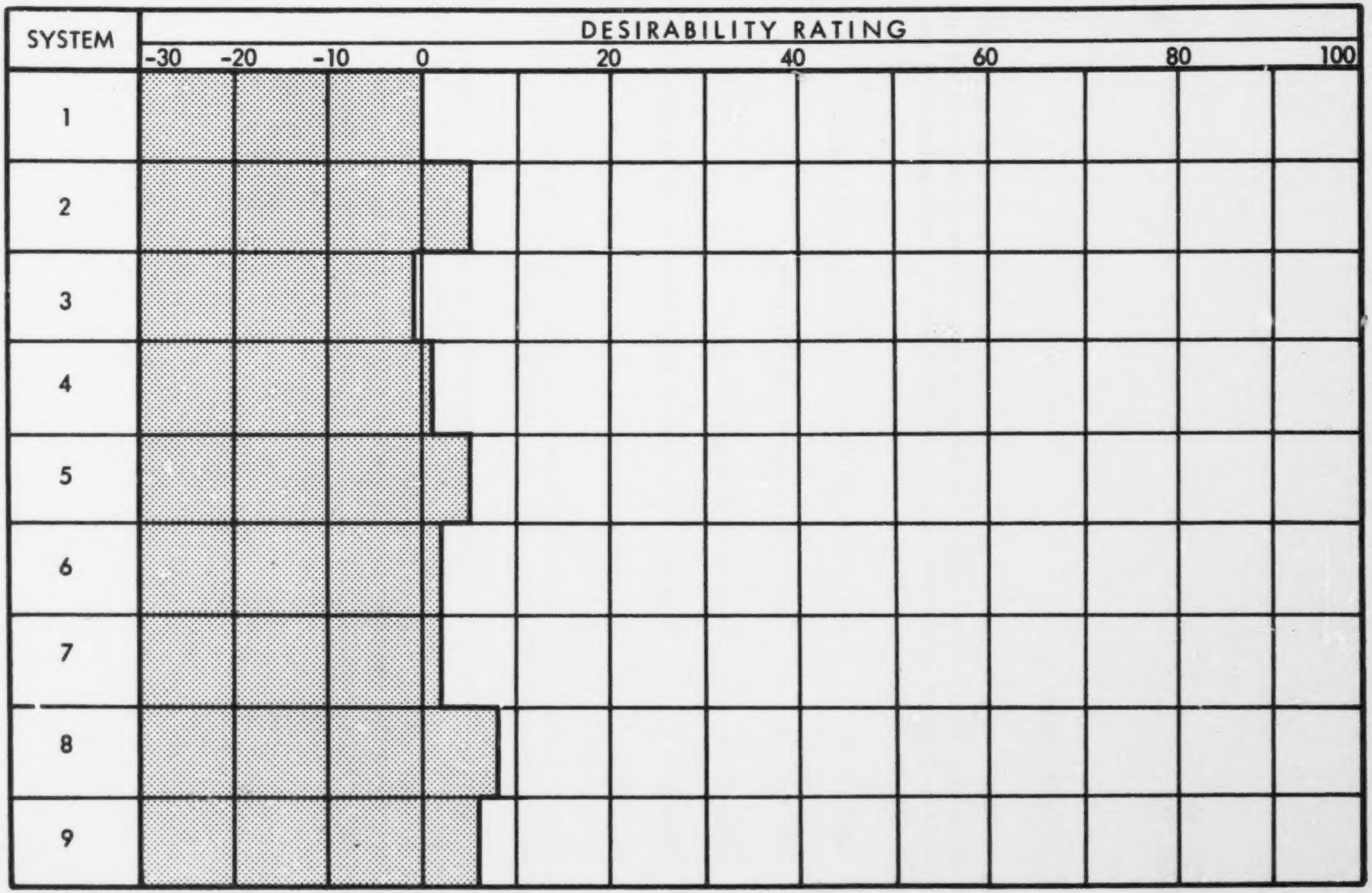
John Wesley Hospital

	S Y S T E M S																	
	1		2		3		4		5		6		7		8		9	
I INVESTMENT																		
Installed Cost of Project		$610,000		$475,000		$630,000		$460,000		$510,000		$485,000		$495,000		$446,000		$455,000
Disposal Value of Assets Retired by Project	$ 200		$ 200		$ 200		$ 200		$ 200		$ 200		$ 200		$ 200		$ 200	
Capital Additions in Absence of Project	15,000		15,000		15,000		15,000		15,000		15,000		15,000		15,000		15,000	
Investment Released or Avoided by Project		15,200		15,200		15,200		15,200		15,200		15,200		15,200		15,200		15,200
Net Investment Required		$594,800		$459,800		$614,800		$444,800		$494,800		$469,800		$479,800		$430,800		$439,800
II NON-OPERATING ADVANTAGE																		
Decline of Present System Disposal Value	$ --		$ --		$ --		$ --		$ --		$ --		$ --		$ --		$ --	
Depreciation on Capital Additions Avoided	600		600		600		600		600		600		600		600		600	
Total Non-Operating Advantage		$ 600		$ 600		$ 600		$ 600		$ 600		$ 600		$ 600		$ 600		$ 600
III OPERATING ADVANTAGE																		
DIRECT EFFECT OF PROJECT	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease
Labor		$ 52,900		$ 51,500		$ 47,100		$ 52,900		$ 52,900		$ 47,100		$ 47,100		$ 62,100		$ 56,000
Maintenance	$ 3,100		$ 2,400		$ 3,200		$ 2,300		$ 2,600		$ 2,400		$ 2,500		$ 2,200		$ 2,300	
Materials and Supplies	4,600		3,600		4,700		3,500		3,800		3,600		3,700		3,300		3,400	
Power	16,200		5,200		16,700		6,400		13,500		7,300		7,200		5,800		5,600	
Floor Space		$ 200		$ 200		$ 200		$ 200		$ 200		$ 200		$ 200		$ 200		$ 200
Net Increase or Decrease in Operating Costs		$ 29,200		$ 40,500		$ 22,700		$ 40,900		$ 33,200		$ 34,000		$ 33,900		$ 51,000		$ 44,900
IV COMPUTATION OF DESIRABILITY RATING																		
Total Advantage	$29,800		$41,100		$23,300		$41,500		$33,800		$34,600		$34,500		$51,600		$45,500	
Depreciation	27,400		19,000		29,400		21,400		26,400		23,900		24,900		18,560		19,700	
Return on Investment	2,400		22,100		-6,100		20,100		7,400		10,700		9,600		33,040		25,800	
Desirability Rating	0		5		-1		5		1		2		2		8		6	

Note: Term "Desirability Rating" is synonymous with percent of return on investment.

FIGURE III-10 COMPARISON OF ECONOMIC DESIRABILITY OF SYSTEMS

John Wesley Hospital



Note: Term "Desirability Rating" is synonymous with percent of return on investment.

OLIVE VIEW HOSPITAL

The evaluation of those system modifications described previously, and the overall effect of those modifications adapted to the solid waste system operation at the new Olive View Hospital compared to the existing operation in the older buildings are summarized in the following group of illustrations:

Table III-16	Percentage Deficiencies of Sub-System Functions
Figure III-11	Comparison of System Deficiencies
Table III-17	Comparison of Project Costs
Table III-18	Economic Evaluation of Solid Waste System Modifications
Figure III-12	Comparison of Economic Desirability of Systems

For supporting detail, the reader is referred to Appendix G, which includes numerical ratings and estimated daily labor costs of each of the modified systems.

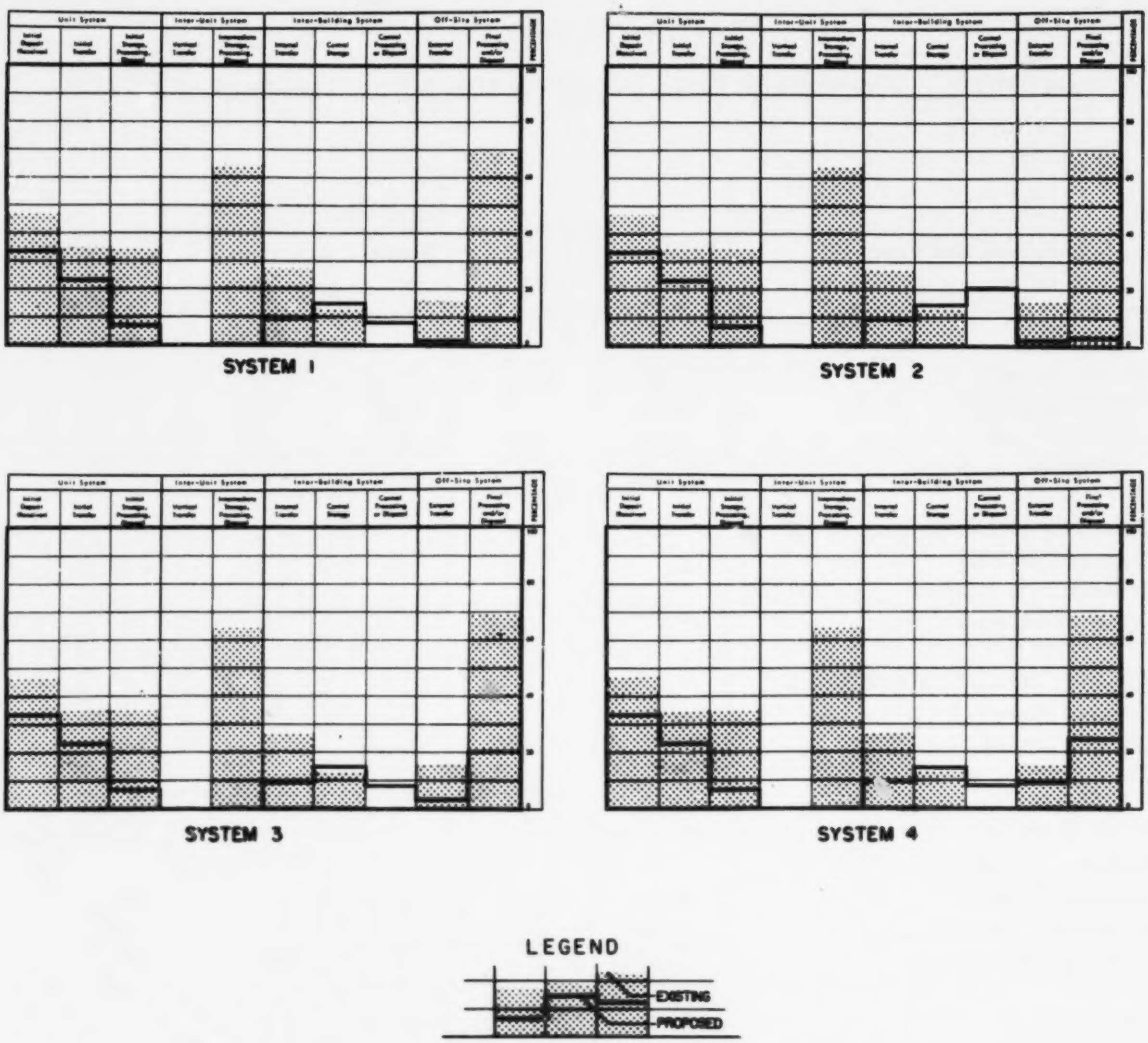
Review of these illustrations indicates investment requirements of the four systems considered that meet the established criteria will range from $387,000 to $607,000. The indicated annual return on the required investment will range from 2% to 13%. The range in system improvements indicates the deficiencies of existing system operation may be decreased by 61% - 72% with major improvement at nearly all levels of operation.

Comparison of Hospital Solid Waste Systems

Olive View Hospital

TABLE III-16 PERCENTAGE DEFICIENCIES OF SUB-SYSTEM FUNCTIONS

Sub-System and Function	Existing System	Improved Systems			
		System 1	System 2	System 3	System 4
UNIT SYSTEM:					
Initial Deposit	47.0	33.3	33.3	33.3	33.3
Initial Transfer	35.0	22.9	22.9	22.9	22.9
Initial Storage	35.3	6.5	6.5	6.5	6.5
Weighted Average	39.0	20.7	20.7	20.7	20.7
INTER-UNIT SYSTEM:					
Vertical Transfer	-	-	-	-	-
Intermediate Storage	64.5	-	-	-	-
Weighted Average	34.0	-	-	-	-
INTER-BUILDING SYSTEM:					
Internal Transfer	27.1	9.4	9.4	9.4	9.4
Central Storage	13.2	14.5	14.5	14.5	14.5
Central Proc. or Disp.	-0-	7.9	20.3	7.9	7.9
Weighted Average	13.0	10.5	14.8	10.5	10.5
OFF-SITE SYSTEM:					
External Transfer	16.0	1.5	1.8	3.3	9.1
Final Proc. or Disp.	69.5	9.4	2.6	20.0	24.3
Weighted Average	56.0	5.7	2.4	15.9	20.5
TOTAL SYSTEM	36.0	10.1	10.3	12.7	14.0
% DECREASE OF DEFICIENCIES	--	72.0	71.5	64.7	61.4



SYSTEM 1

SYSTEM 2

SYSTEM 3

SYSTEM 4

FIGURE III-11 COMPARISON OF SYSTEM DEFICIENCIES
Olive View Hospital

TABLE III-17 COMPARISON OF PROJECT COSTS

Olive View Hospital

SYSTEM	SYSTEM COMPONENT	INSTALLED COSTS	ESTIMATED LIFE (YEARS)	DEPRECIATION
1	Vacuum Tube	$220,000	25	$ 8,800
	Grinders	75,000	10	7,500
	Building	100,000	25	4,000
	Wet Oxidation	200,000	25	8,000
	Total	$595,000		$28,300
2	Vacuum Tube	$220,000	25	$ 8,800
	Incinerator	200,000	25	8,000
	Total	$420,000		$16,800
3	Vacuum Tube	$220,000	25	$ 8,800
	Grinders	75,000	10	7,500
	Building	100,000	25	4,000
	Wet Oxidation	200,000	25	8,000
	Truck	20,000	10	2,000
	Total	$615,000		$30,300
4	Vacuum Tube	$220,000	25	$ 8,800
	Grinder	75,000	10	7,500
	Building	100,000	25	4,000
	Total	$395,000		$20,300
5	Vacuum Tube	$220,000	25	$ 8,800
	Grinders	75,000	10	7,500
	Building	100,000	25	4,000
	Extruders	50,000	10	5,000
	Truck	20,000	10	2,000
	Total	$465,000		$27,300
6	Vacuum Tube	$220,000	25	$ 8,800
	Shred	80,000	10	8,000
	Building	100,000	25	4,000
	Truck	20,000	10	2,000
	Total	$420,000		$22,800
7	Vacuum Tube	$220,000	25	$ 8,800
	Grinders	75,000	10	7,500
	Dewater	25,000	10	2,500
	Building	100,000	25	4,000
	Truck	20,000	10	2,000
	Total	$440,000		$24,800
8	Vacuum Tube	$220,000	25	$ 8,800
	Compactor	20,000	10	2,000
	Containers	6,000	25	240
	Building	100,000	25	4,000
	Equipment	30,000	25	1,200
	Total	$376,000		$17,240
9	Vacuum Tube	$220,000	25	$ 8,800
	Trucks	30,000	10	3,000
	Building	100,000	25	4,000
	Equipment	30,000	25	1,200
	Total	$380,000		$17,000

TABLE III-18 ECONOMIC EVALUATION OF SOLID WASTE SYSTEM MODIFICATIONS

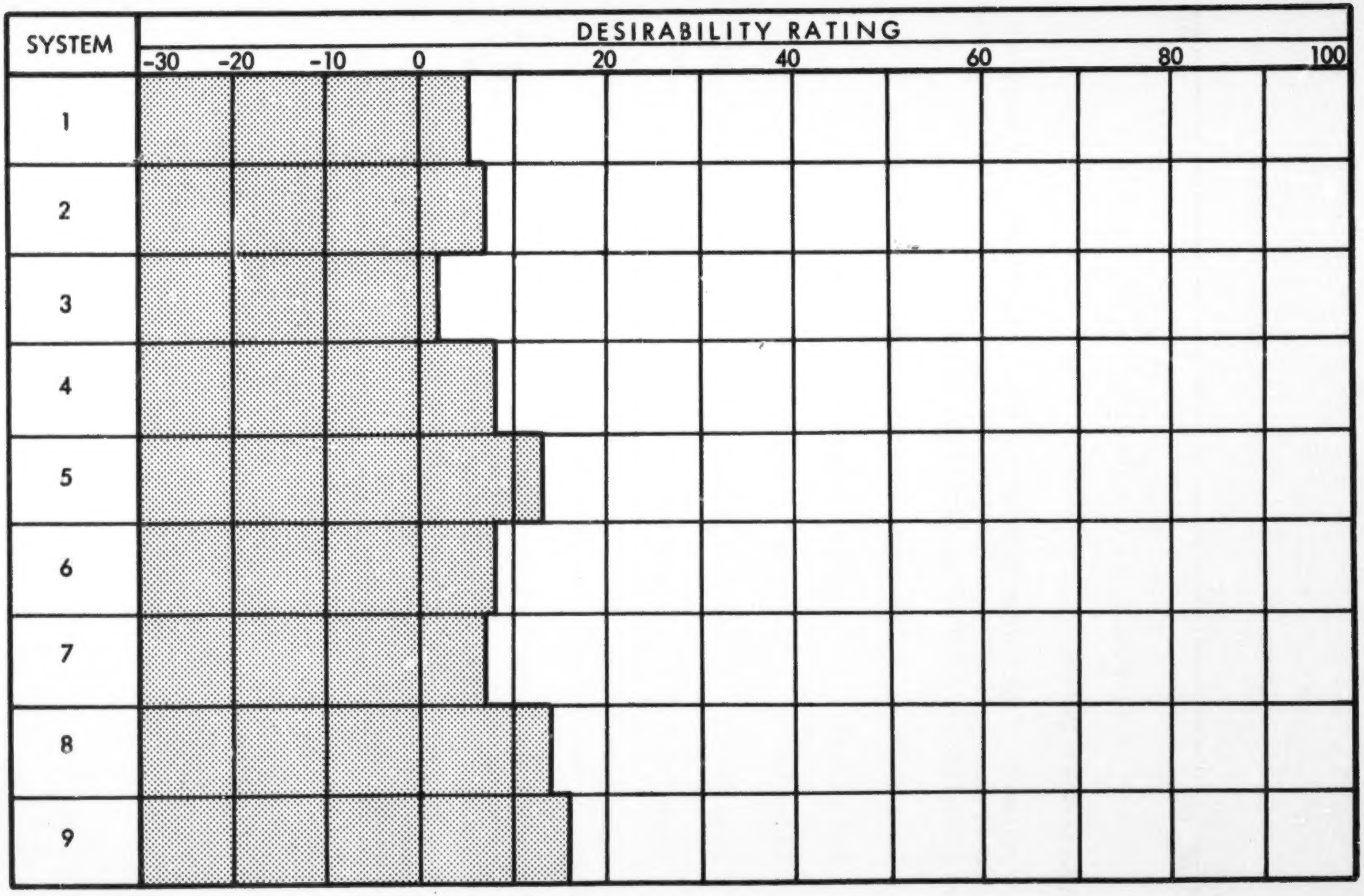
Olive View Hospital

	SYSTEMS																	
	1		2		3		4		5		6		7		8		9	
I INVESTMENT																		
Installed Cost of Project		$595,000		$420,000		$615,000		$395,000		$465,000		$420,000		$440,000		$376,000		$380,000
Disposal Value of Assets Retired by Project	$ 7,900		$ 7,900		$ 7,900		$ 7,900		$ 7,900		$ 7,900		$ 7,900		$ 7,900		$ 7,900	
Capital Additions in Absence of Project	--		--		--		--		--		--		--		--		--	
Investment Released or Avoided by Project		7,900		7,900		7,900		7,900		7,900		7,900		7,900		7,900		7,900
Net Investment Required		$587,100		$412,100		$607,100		$387,100		$457,100		$412,100		$432,100		$368,100		$372,100
II NON-OPERATING ADVANTAGE																		
Decline of Present System Disposal Value	$ 900		$ 900		$ 900		$ 900		$ 900		$ 900		$ 900		$ 900		$ 900	
Depreciation on Capital Additions Avoided	--		--		--		--		--		--		--		--		--	
Total Non-Operating Advantage		$ 900		$ 900		$ 900		$ 900		$ 900		$ 900		$ 900		$ 900		$ 900
III OPERATING ADVANTAGE																		
DIRECT EFFECT OF PROJECT	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease
Labor		$ 78,000		$ 54,400		$ 64,400		$ 78,000		$ 78,000		$ 64,400		$ 64,400		$ 75,300		$ 81,800
Maintenance	$ 3,000		$ 2,100		$ 3,100		$ 2,000		$ 2,300		$ 2,100		$ 2,200		$ 1,900		$ 1,900	
Materials and Supplies	4,500		3,200		4,600		3,000		3,500		3,200		3,300		2,800		2,900	
Power	15,800		4,600		16,300		5,500		12,300		6,300		6,400		4,900		4,800	
Floor Space		$ 1,900		$ 1,900		$ 1,900		$ 1,900		$ 1,900		$ 1,900		$ 1,900		$ 1,900		$ 1,900
Net Increase or Decrease in Operating Costs		$ 56,600		$ 46,400		$ 42,300		$ 69,400		$ 61,800		$ 54,700		$ 54,400		$ 67,800		$ 74,100
IV COMPUTATION OF DESIRABILITY RATING																		
Total Advantage	$57,500		$47,300		$43,200		$70,300		$62,700		$55,600		$55,300		$68,700		$75,000	
Depreciation	28,300		16,800		30,300		20,300		27,300		22,800		24,800		17,240		17,000	
Return on Investment	29,200		30,500		12,900		50,000		35,400		32,800		30,500		51,460		58,000	
Desirability Rating	5		7		2		13		8		8		7		14		16	

Note: Term "Desirability Rating" is synonymous with percent of return on investment.

FIGURE III-12 COMPARISON OF ECONOMIC DESIRABILITY OF SYSTEMS

Olive View Hospital



Note: Term "Desirability Rating" is synonymous with percent of return on investment.

MIRA LOMA HOSPITAL

The evaluation of those system modifications described previously, and the overall effect of those modifications on the solid waste system operation at Mira Loma Hospital are summarized in the following group of illustrations:

Table III-19	Percentage Deficiencies of Sub-System Functions
Figure III-13	Comparison of System Deficiencies
Table III-20	Comparison of Project Costs
Table III-21	Economic Evaluation of Solid Waste System Modifications
Figure III-14	Comparison of Economic Desirability of Systems

For supporting detail, the reader is referred to Appendix H, which includes numerical ratings and estimated daily labor costs of each of the modified systems.

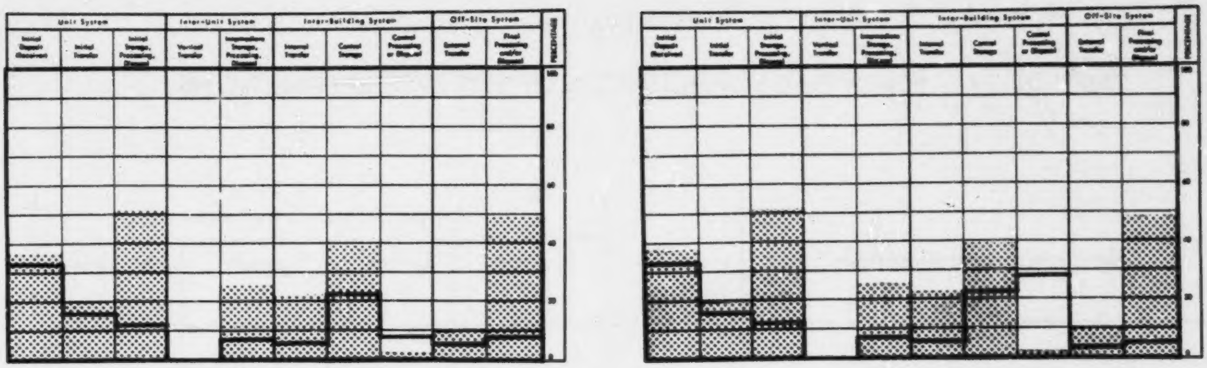
Review of these illustrations indicates investment requirements of the four systems considered that meet the established criteria will range from $290,000 to $435,000. The indicated annual return on the required investment will range upwards to 8%. The range in system improvements indicates the deficiencies of existing system operation may be decreased by 48% - 61% with major improvement at nearly all levels of operation.

Comparison of Hospital Solid Waste Systems

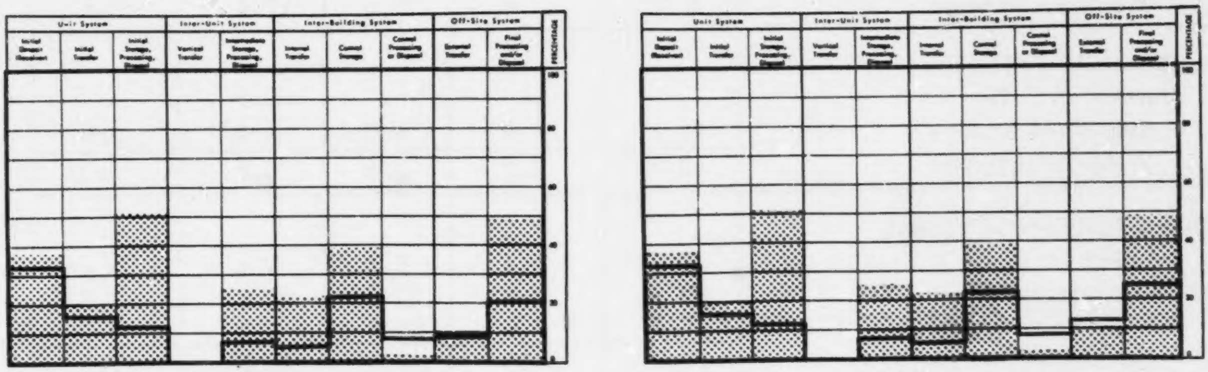
Mira Loma Hospital

TABLE III-19 PERCENTAGE DEFICIENCIES OF SUB-SYSTEM FUNCTIONS

Sub-System and Function	Existing System	Improved Systems			
		System 1	System 2	System 3	System 4
UNIT SYSTEM:					
Initial Deposit	37.3	32.5	32.5	32.5	32.5
Initial Transfer	20.5	15.5	15.5	15.5	15.5
Initial Storage	51.6	11.9	11.9	11.9	11.9
Weighted Average	37.0	19.8	19.8	19.8	19.8
INTER-UNIT SYSTEM:					
Vertical Transfer	-	-	-	-	-
Intermediate Storage	25.4	6.9	6.9	6.9	6.9
Weighted Average	13.0	3.6	3.6	3.6	3.6
INTER-BUILDING SYSTEM:					
Internal Transfer	22.3	5.4	5.4	5.4	5.4
Central Storage	39.3	22.2	22.2	22.2	22.2
Central Proc. or Disp.	2.5	7.9	27.9	7.9	7.9
Weighted Average	21.0	11.5	18.6	11.5	11.5
OFF-SITE SYSTEM:					
External Transfer	10.5	5.1	3.3	8.7	12.7
Final Proc. or Disp.	49.2	7.5	5.1	20.4	24.6
Weighted Average	40.0	6.9	4.7	17.5	21.7
TOTAL SYSTEM	29.0	11.2	12.3	13.9	15.0
% DECREASE OF DEFICIENCIES	--	61.2	57.3	51.7	47.9



SYSTEM 1 **SYSTEM 2**



SYSTEM 3 **SYSTEM 4**

LEGEND

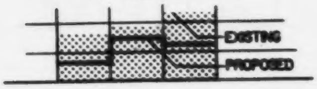

EXISTING
PROPOSED

FIGURE III-13 COMPARISON OF SYSTEM DEFICIENCIES
Mira Loma Hospital

TABLE III-20 COMPARISON OF PROJECT COSTS

Mira Loma Hospital

SYSTEM	SYSTEM COMPONENT	INSTALLED COSTS	ESTIMATED LIFE (YEARS)	DEPRECIATION
1	Vacuum Tube	$200,000	25	$ 8,000
	Grinders	40,000	10	4,000
	Building	50,000	25	2,000
	Wet Oxidation	125,000	25	5,000
	Total	$415,000		$19,000
2	Vacuum Tube	$200,000	25	$ 8,000
	Incinerator	75,000	25	3,000
	Total	$275,000		$11,000
3	Vacuum Tube	$200,000	25	$ 8,000
	Grinders	40,000	10	4,000
	Building	50,000	25	2,000
	Wet Oxidation	125,000	25	5,000
	Truck	20,000	10	2,000
	Total	$435,000		$21,000
4	Vacuum Tube	$200,000	25	$ 8,000
	Grinder	40,000	10	4,000
	Building	50,000	25	2,000
	Total	$290,000		$14,000
5	Vacuum Tube	$200,000	25	$ 8,000
	Grinders	40,000	10	4,000
	Building	50,000	25	2,000
	Extruders	20,000	10	2,000
	Truck	20,000	10	2,000
	Total	$330,000		$18,000
6	Vacuum Tube	$200,000	25	$ 8,000
	Shred	45,000	10	4,500
	Building	50,000	25	2,000
	Truck	20,000	10	2,000
	Total	$315,000		$16,500
7	Vacuum Tube	$200,000	25	$ 8,000
	Grinders	40,000	10	4,000
	Dewater	10,000	10	1,000
	Building	50,000	25	2,000
	Truck	20,000	10	2,000
	Total	$320,000		$17,000
8	Vacuum Tube	$200,000	25	$ 8,000
	Compactor	8,000	10	800
	Containers	3,000	25	120
	Building	50,000	25	2,000
	Equipment	10,000	25	400
	Total	$271,000		$11,320
9	Vacuum Tube	$200,000	25	$ 8,000
	Trucks	25,000	10	2,500
	Building	50,000	25	2,000
	Equipment	10,000	25	400
	Total	$285,000		$12,900

TABLE III-21 ECONOMIC EVALUATION OF SOLID WASTE SYSTEM MODIFICATIONS

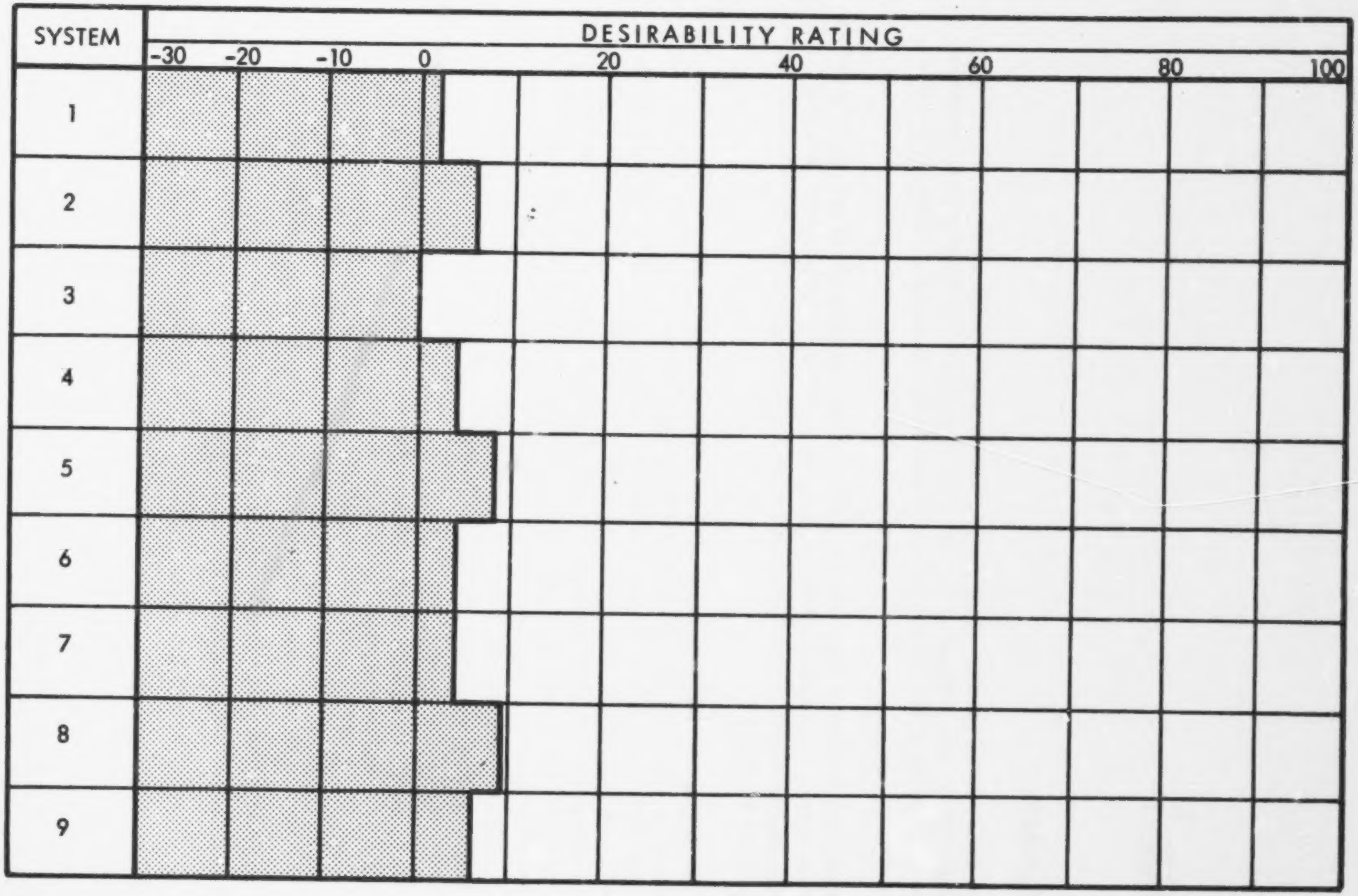
Mira Loma Hospital

	SYSTEMS																	
	1		2		3		4		5		6		7		8		9	
I INVESTMENT																		
Installed Cost of Project		$415,000		$275,000		$435,000		$290,000		$330,000		$315,000		$320,000		$271,000		$285,000
Disposal Value of Assets Retired by Project	--		--		--		--		--		--		--		--		--	
Capital Additions in Absence of Project	--		--		--		--		--		--		--		--		--	
Investment Released or Avoided by Project		--		--		--		--		--		--		--		--		--
Net Investment Required		$415,000		$275,000		$435,000		$290,000		$330,000		$315,000		$320,000		$271,000		$285,000
II NON-OPERATING ADVANTAGE																		
Decline of Present System Disposal Value	--		--		--		--		--		--		--		--		--	
Depreciation on Capital Additions Avoided	--		--		--		--		--		--		--		--		--	
Total Non-Operating Advantage		--		--		--		--		--		--		--		--		--
III OPERATING ADVANTAGE																		
DIRECT EFFECT OF PROJECT	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease
Labor		$ 42,600		$ 32,700		$ 36,800		$ 42,600		$ 42,600		$ 36,800		$ 36,800		$ 43,500		$ 37,300
Maintenance	$ 2,100		$ 1,400		$ 2,200		$ 1,500		$ 1,700		$ 1,600		$ 1,600		$ 1,400		$ 1,400	
Materials and Supplies	3,100		2,100		3,300		2,200		2,500		2,400		2,400		2,000		2,100	
Power	10,100		3,000		11,500		4,100		8,700		4,700		4,600		3,500		3,600	
Floor Space		--		--		--		--		--		--		--		--		--
Net Increase or Decrease in Operating Costs		$ 27,300		$ 26,200		$ 19,800		$ 36,300		$ 29,700		$ 28,100		$ 28,200		$ 36,600		$ 30,200
IV COMPUTATION OF DESIRABILITY RATING																		
Total Advantage	$27,300		$26,200		$19,800		$36,300		$29,700		$28,100		$28,200		$36,600		$30,200	
Depreciation	19,000		11,000		21,000		14,000		18,000		16,500		17,000		11,320		12,900	
Return on Investment	8,300		15,200		-1,200		22,300		11,700		11,600		11,200		25,280		17,300	
Desirability Rating	2		6		0		8		4		4		4		9		6	

Note: Term "Desirability Rating" is synonymous with percent of return on investment.

FIGURE III-1[illegible] COMPARISON OF ECONOMIC DESIRABILITY OF SYSTEMS

Mira Loma Hospital



Note: Term "Desirability Rating" is synonymous with percent of return on investment.

SUMMARY

In review of the evaluation of system modifications as presented in this volume, Table III-22 was prepared in summary of these findings, showing comparisons in system deficiencies, investment requirements and increase or decrease in annual costs.

Based on investment requirements and the effect on annual costs of operation of the four systems considered, System 4 (pulping with discharge of wastes to sewers) has considerable merit, while at the same time improving in-plant conditions as well as off-site handling.

The solution for the total community problem in off-site handling of hospital wastes could be achieved if pulping or grinding and discharge to sewers can be proven feasible and accepted by local authorities. Hospitals, nursing homes, clinics, etc. where contaminated wastes are concentrated could utilize a recognized contaminated transport channel (the sewer) with disposal at limited and controlled locations (sewage treatment plants). Personnel at these plants are accustomed and trained in handling and processing such contaminated materials in a routine manner with reasonable safeguards to the community environment. Based on local environmental conditions and needs, further development of this concept is warranted.

Comparison of Hospital Solid Waste Systems

TABLE III-22 EFFECT OF SYSTEM MODIFICATIONS

	LAC-USC Medical Center	Long Beach General Hospital	Harbor General Hospital	Rancho Los Amigos Hospital	John Wesley Hospital	Olive View Hospital	Mira Loma Hospital	Total All Hospitals	% Return on Investment
COMPARISON OF SYSTEM DEFICIENCIES									
Existing System	58%	25%	37%	20%	26%	36%	29%	--	--
Considered System Modifications:									
System 1	20.6%	9.9%	12.6%	9.0%	11.1%	10.1%	11.2%	--	--
System 2	20.8%	10.1%	12.8%	9.2%	11.5%	10.3%	12.3%	--	--
System 3	23.2%	12.5%	15.2%	11.6%	13.8%	12.7%	13.9%	--	--
System 4	24.4%	13.7%	16.4%	12.8%	15.0%	14.0%	15.0%	--	--
EXISTING ANNUAL OPERATING COSTS	$2,396,850	$223,600	$777,435	$ 656,340	$296,582	$750,585	$175,200	$5,276,592	--
COSTS OF SYSTEM MODIFICATIONS:									
System 1 - Net Investment	$2,292,000	$645,000	$698,000	$1,732,800	$594,800	$587,100	$415,000	$6,964,700	
*Annual Cost Difference	(389,250)	45,500	(54,700)	58,900	(2,400)	(29,200)	(8,300)	(379,450)	5.4%
System 2 - Net Investment	$2,272,000	$500,000	$573,000	$1,667,800	$459,800	$412,100	$275,000	$6,159,700	
*Annual Cost Difference	(428,325)	21,500	(74,400)	24,000	(22,100)	(30,500)	(15,200)	(525,025)	8.5%
System 3 - Net Investment	$2,317,000	$647,000	$718,000	$1,752,800	$614,800	$607,100	$435,000	$7,091,700	
*Annual Cost Difference	(379,900)	53,400	(37,900)	75,200	6,100	(12,900)	1,200	(294,800)	4.2%
System 4 - Net Investment	$1,932,000	$495,000	$498,000	$1,507,800	$444,800	$387,100	$290,000	$5,554,700	
*Annual Cost Difference	(431,200)	27,500	(76,100)	22,200	(20,100)	(50,000)	(22,300)	(594,400)	10.7%

*Increase or decrease ( ) over annual operating costs of the existing solid waste system, including annual depreciation expense for buildings and equipment but, excluding interest expense and any additional off-site disposal costs that may be assessed.

VOL. IV SELECTION AND DESIGN OF SOLID WASTE SYSTEMS

CHAP. IV MODIFICATION OF OFFICE BUILDING SYSTEMS

Page No.

SYSTEM CRITERIA IV-1

IDENTIFICATION OF CONSIDERED SYSTEM MODIFICATIONS IV-2

EVALUATION OF MODIFIED SYSTEMS IV-2

SUMMARY IV-11

LIST OF TABLES

IV-1 Numerical Rating of Office Building Solid Waste Systems Systems 1 & 4 IV-3
IV-2 Numerical Rating of Office Building Solid Waste Systems System 2 IV-4
IV-3 Numerical Rating of Office Building Solid Waste Systems System 3 IV-5
IV-4 Comparison of Office Building Project Costs IV-6
IV-5 Estimated Daily Labor Requirements and Costs of Systems 2 and 3 IV-7
IV-6 Estimated Daily Labor Requirements and Costs of System 4 IV-8
IV-7 Economic Evaluation of Solid Waste System Modifications IV-9
IV-8 Comparison of Office Building Solid Waste Systems Effect of System Modifications IV-12

LIST OF FIGURES

IV-1 Comparison of Economic Desirability of Systems IV-10

The evaluations of existing systems in the office buildings under study, as reported in Volume II, indicate these systems are operated with reasonable economy and with relatively minor deficiencies.

These investigations found that these systems are operated largely without specialized equipment by custodial work forces as they perform daily routine cleaning and maintenance functions. This work is generally performed when buildings are unoccupied, thereby permitting effective supervision and control of these activities.

Composition of wastes generated in the office buildings studied were neither hazardous nor objectionable when related to handling or disposal. Largely consisting of paper with an intermix of small quantities of food wastes and non-combustibles, these materials are generated in relatively low volumes.

The numerical rating, reflecting the environmental aspects of these evaluations, identified that the major deficiencies exist in storage functions and the off-site system. These deficiencies are relatively minor by comparison to those found in the hospital waste systems. Upgrading of these systems as in the case of hospitals requires adopting higher standards of operation. The motivation for adopting such standards is multipurpose; to improve building safety and safety of occupants through elimination of fire hazards and conservation of space through minimizing storage. Based upon the equipment research undertaken in this study, there are limited mechanical devices that can be employed to help achieve such improvements. Such improvements for these buildings will require additional capital investments and likely result in higher annual costs than presently experienced.

SYSTEM CRITERIA

Minimum modifications that may be considered, limited to such installations as gravity chutes and/or stationary compactors or balers, will require only nominal investments and accomplish the basic objective of improving on-site storage deficiencies.

Major modifications, eliminating in-building storage entirely, may be feasible in major building complexes. Such systems, employing pneumatic conveyor systems, could evacuate materials deposited in gravity chutes in each building and convey these materials to a central storage or processing point. Such processes including compaction or baling, pulping or grinding and incineration may be considered as the final on-site treatment of wastes. However, due to the severity of air pollution in the Los Angeles Basin, the latter has not been considered suitable for the Civic Center buildings under study.

IDENTIFICATION OF CONSIDERED SYSTEM MODIFICATIONS

Reference to the identification of those modified systems considered in the evaluations will be limited to the ID numbers established as follows:

1 - Manual Fed Stationary Compactor (System serves single building), Continued Transport to Sanitary Landfill

2 - Gravity Chutes, Pneumatic Conveyor System, Central Stationary Compactor (System serves several buildings), Continued Transport to Sanitary Landfill

3 - Gravity Chutes, Pneumatic Conveyor System, Central Wet Grinding Station, Discharge to Sewers and/or Reclamation of Pulp (System serves several buildings)

4 - Gravity Chute, Stationary Compactor (System serves single building), Continued Transport to Sanitary Landfill

EVALUATION OF MODIFIED SYSTEMS

The procedures in evaluation of office building systems follow the same procedures as outlined earlier for hospitals. The following evaluations of the modified systems include tabular and graphic illustrations of the numerical ratings, estimated project costs, estimated daily labor costs and the economic analysis of such modifications considered at the four office buildings under study. The above described systems are considered at each of these buildings except the Engineers Building, wherein, due to its remote location from the tunnel system connecting the Civic Center buildings, only systems 1 and 4 may be feasible.

TABLE IV-1 NUMERICAL RATING OF OFFICE BUILDING SOLID WASTE SYSTEMS

SYSTEMS 1 & 4

System Components			HALL OF RECORDS				HALL OF ADMINISTRATION				COUNTY COURTHOUSE				ENGINEERS BUILDING			
			RUBBISH		Total		RUBBISH		Total		RUBBISH		Total		RUBBISH		Total	
			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value
UNIT SYSTEM	Initial Deposit (Receiver)	Sanitation	2	10	9	40	2	10	9	40	2	10	9	40	2	10	9	40
		Safety	1	5			1	5			1	5			1	5		
		Security	1	5			1	5			1	5			1	5		
		Esthetics	5	20			5	20			5	20			5	20		
	Initial Transfer	Sanitation	2	10	5	30	2	10	5	30	2	10	5	30	2	10	5	30
		Safety	1	5			1	5			1	5			1	5		
		Security	0	5			0	5			0	5			0	5		
		Esthetics	2	10			2	10			2	10			2	10		
	Initial Storage, Processing, Disposal	Sanitation		5		55		5		55		5		55		5		55
		Safety		15				15				15				15		
		Security		15				15				15				15		
		Esthetics		20				20				20				20		
	Total	Sanitation	4	25	14	125	4	25	14	125	4	25	14	125	4	25	14	125
		Safety	2	25			2	25			2	25			2	25		
		Security	1	25			1	25			1	25			1	25		
		Esthetics	7	50			7	50			7	50			7	50		
INTER-UNIT SYSTEM	Internal Transfer	Sanitation	5	25	12	60	5	25	12	60	5	25	12	60	5	25	12	60
		Safety	3	15			3	15			3	15			3	15		
		Security	2	10			2	10			2	10			2	10		
		Esthetics	2	10			2	10			2	10			2	10		
	Central Storage	Sanitation		10		75		10		75		10		75		10		75
		Safety		25				25				25				25		
		Security		30				30				30				30		
		Esthetics		10				10				10				10		
	Central Processing or Disposal	Sanitation	4	15	17	40	4	15	17	40	4	15	17	40	4	15	17	40
		Safety	5	10			5	10			5	10			5	10		
		Security	5	10			5	10			5	10			5	10		
		Esthetics	3	5			3	5			3	5			3	5		
	Total	Sanitation	9	50	29	175	9	50	29	175	9	50	29	175	9	50	29	175
		Safety	8	50			8	50			8	50			8	50		
		Security	7	50			7	50			7	50			7	50		
		Esthetics	5	25			5	25			5	25			5	25		
OFF-SITE SYSTEM	External Transfer	Sanitation	2	10	5	30	2	10	5	30	2	10	5	30	2	10	5	30
		Safety	2	10			2	10			2	10			2	10		
		Security	0	5			0	5			0	5			0	5		
		Esthetics	1	5			1	5			1	5			1	5		
	Final Processing and/or Disposal	Sanitation	3	15	50	70	3	15	50	70	3	15	50	70	3	15	50	70
		Safety	12	15			12	15			12	15			12	15		
		Security	20	20			20	20			20	20			20	20		
		Esthetics	15	20			15	20			15	20			15	20		
	Total	Sanitation	5	25	55	100	5	25	55	100	5	25	55	100	5	25	55	100
		Safety	14	25			14	25			14	25			14	25		
		Security	20	25			20	25			20	25			20	25		
		Esthetics	16	25			16	25			16	25			16	25		
TOTAL		Sanitation	18	100	98	400	18	100	98	400	18	100	98	400	18	100	98	400
		Safety	24	100			24	100			24	100			24	100		
		Security	28	100			28	100			28	100			28	100		
		Esthetics	28	100			28	100			28	100			28	100		

TABLE IV-2 NUMERICAL RATING OF OFFICE BUILDING SOLID WASTE SYSTEMS

SYSTEM 2

System Components			HALL OF RECORDS				HALL OF ADMINISTRATION				COUNTY COURTHOUSE							
			RUBBISH		Total		RUBBISH		Total		RUBBISH		Total		RUBBISH		Total	
			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value
UNIT SYSTEM	Initial Deposit (Receiver)	Sanitation	2	10	9	40	2	10	9	40	2	10	9	40		10		40
		Safety	1	5			1	5			1	5				5		
		Security	1	5			1	5			1	5				5		
		Esthetics	5	20			5	20			5	20				20		
	Initial Transfer	Sanitation	2	10	5	30	2	10	5	30	2	10	5	30		10		30
		Safety	1	5			1	5			1	5				5		
		Security	0	5			0	5			0	5				5		
		Esthetics	2	10			2	10			2	10				10		
	Initial Storage, Processing, Disposal	Sanitation		5		55		5		55		5		55		5		55
		Safety		15				15				15				15		
		Security		15				15				15				15		
		Esthetics		20				20				20				20		
	Total	Sanitation	4	25	14	125	4	25	14	125	4	25	14	125		25		125
		Safety	2	25			2	25			2	25				25		
		Security	1	25			1	25			1	25				25		
		Esthetics	7	50			7	50			7	50				50		
INTER-UNIT SYSTEM	Internal Transfer	Sanitation	5	25	5	60	5	25	5	60	5	25	5	60		25		60
		Safety	0	15			0	15			0	15				15		
		Security	0	10			0	10			0	10				10		
		Esthetics	0	10			0	10			0	10				10		
	Central Storage	Sanitation		10		75		10		75		10		75		10		75
		Safety		25				25				25				25		
		Security		30				30				30				30		
		Esthetics		10				10				10				10		
	Central Processing or Disposal	Sanitation	4	15	6	40	4	15	6	40	4	15	6	40		15		40
		Safety	2	10			2	10			2	10				10		
		Security	0	10			0	10			0	10				10		
		Esthetics	0	5			0	5			0	5				5		
	Total	Sanitation	9	50	11	175	9	50	11	175	9	50	11	175		50		175
		Safety	2	50			2	50			2	50				50		
		Security	0	50			0	50			0	50				50		
		Esthetics	0	25			0	25			0	25				25		
OFF-SITE SYSTEM	External Transfer	Sanitation	2	10	5	30	2	10	5	30	2	10	5	30		10		30
		Safety	2	10			2	10			2	10				10		
		Security	0	5			0	5			0	5				5		
		Esthetics	1	5			1	5			1	5				5		
	Final Processing and/or Disposal	Sanitation	3	15	50	70	3	15	50	70	3	15	50	70		15		70
		Safety	12	15			12	15			12	15				15		
		Security	20	20			20	20			20	20				20		
		Esthetics	15	20			15	20			15	20				20		
	Total	Sanitation	5	25	55	100	5	25	55	100	5	25	55	100		25		100
		Safety	14	25			14	25			14	25				25		
		Security	20	25			20	25			20	25				25		
		Esthetics	16	25			16	25			16	25				25		
TOTAL		Sanitation	18	100	80	400	18	100	80	400	18	100	80	400		100		400
		Safety	18	100			18	100			18	100				100		
		Security	21	100			21	100			21	100				100		
		Esthetics	23	100			23	100			23	100				100		

TABLE IV-3 NUMERICAL RATING OF OFFICE BUILDING SOLID WASTE SYSTEMS

SYSTEM 3

System Components			HALL OF RECORDS				HALL OF ADMINISTRATION				COUNTY COURTHOUSE							
			RUBBISH		Total		RUBBISH		Total		RUBBISH		Total		RUBBISH		Total	
			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value
UNIT SYSTEM	Initial Deposit (Receiver)	Sanitation	2	10	9	40	2	10	9	40	2	10	9	40		10		40
		Safety	1	5			1	5			1	5				5		
		Security	1	5			1	5			1	5				5		
		Esthetics	5	20			5	20			5	20				20		
	Initial Transfer	Sanitation	2	10	5	30	2	10	5	30	2	10	5	30		10		30
		Safety	1	5			1	5			1	5				5		
		Security	0	5			0	5			0	5				5		
		Esthetics	2	10			2	10			2	10				10		
	Initial Storage, Processing, Disposal	Sanitation		5		55		5		55		5		55		5		55
		Safety		15				15				15				15		
		Security		15				15				15				15		
		Esthetics		20				20				20				20		
	Total	Sanitation	4	25	14	125	4	25	14	125	4	25	14	125		25		125
		Safety	2	25			2	25			2	25				25		
		Security	1	25			1	25			1	25				25		
		Esthetics	7	50			7	50			7	50				50		
INTER-UNIT SYSTEM	Internal Transfer	Sanitation	5	25	5	60	5	25	5	60	5	25	5	60		25		60
		Safety	0	15			0	15			0	15				15		
		Security	0	10			0	10			0	10				10		
		Esthetics	0	10			0	10			0	10				10		
	Central Storage	Sanitation		10		75		10		75		10		75		10		75
		Safety		25				25				25				25		
		Security		30				30				30				30		
		Esthetics		10				10				10				10		
	Central Processing or Disposal	Sanitation	4	15	6	40	4	15	6	40	4	15	6	40		15		40
		Safety	2	10			2	10			2	10				10		
		Security	0	10			0	10			0	10				10		
		Esthetics	0	5			0	5			0	5				5		
	Total	Sanitation	9	50	11	175	9	50	11	175	9	50	11	175		50		175
		Safety	2	50			2	50			2	50				50		
		Security	0	50			0	50			0	50				50		
		Esthetics	0	25			0	25			0	25				25		
OFF-SITE SYSTEM	External Transfer	Sanitation	0	10	0	30	0	10	0	30	0	10	0	30		10		30
		Safety	0	10			0	10			0	10				10		
		Security	0	5			0	5			0	5				5		
		Esthetics	0	5			0	5			0	5				5		
	Final Processing and/or Disposal	Sanitation	0	15	0	70	0	15	0	70	0	15	0	70		15		70
		Safety	0	15			0	15			0	15				15		
		Security	0	20			0	20			0	20				20		
		Esthetics	0	20			0	20			0	20				20		
	Total	Sanitation	0	25	0	100	0	25	0	100	0	25	0	100		25		100
		Safety	0	25			0	25			0	25				25		
		Security	0	25			0	25			0	25				25		
		Esthetics	0	25			0	25			0	25				25		
TOTAL		Sanitation	13	100	25	400	13	100	25	400	13	100	25	400		100		400
		Safety	4	100			4	100			4	100				100		
		Security	1	100			1	100			1	100				100		
		Esthetics	7	100			7	100			7	100				100		

TABLE IV-4 COMPARISON OF OFFICE BUILDING PROJECT COSTS

BUILDING	SYSTEM	SYSTEM COMPONENTS	INSTALLED COSTS	ESTIMATED LIFE (YEARS)	DEPRECIATION
HALL OF ADMINISTRATION	1	Compactor	$ 12,000	10	$1,200
	2	Vacuum Tube	$102,200	25	$4,088
		Gravity Chute	4,050	25	162
		Compactors	6,250	10	625
		Building	25,000	25	1,000
		Total	$137,500		$5,875
	3	Vacuum Tube	$102,200	25	$4,088
		Gravity Chute	4,050	25	162
		Grinders	18,750	10	1,875
		Building	25,000	25	1,000
		Total	$150,000		$7,125
	4	Gravity Chute	$ 4,050	25	$ 162
		Compactor	15,000	10	1,500
		Total	$ 19,050		$1,660
COUNTY COURTHOUSE	1	Compactor	$ 12,000	10	$1,200
	2	Vacuum Tube	$102,200	25	$4,088
		Gravity Chute	4,050	25	162
		Compactors	6,250	10	625
		Building	25,000	25	1,000
		Total	$137,500		$5,875
	3	Vacuum Tube	$102,200	25	$4,088
		Gravity Chute	4,050	25	162
		Grinders	18,750	10	1,875
		Building	25,000	25	1,000
		Total	$150,000		$7,125
	4	Gravity Chute	$ 4,050	25	$ 162
		Compactor	15,000	10	1,500
		Total	$ 19,050		$1,660
HALL OF RECORDS	1	Compactor	$ 12,000	10	$1,200
	2	Vacuum Tube	$102,200	25	$4,088
		Gravity Chute	7,650	25	306
		Compactors	6,250	10	625
		Building	25,000	25	1,000
		Total	$141,100		$6,020
	3	Vacuum Tube	$102,200	25	$4,088
		Gravity Chute	7,650	25	306
		Grinders	18,750	10	1,875
		Building	25,000	25	1,000
		Total	$153,600		$7,270
	4	Gravity Chute	$ 7,650	25	$ 306
		Compactor	15,000	10	1,500
		Total	$ 22,650		$1,810
ENGINEERS BUILDING	1	Compactor	$ 12,000	10	$1,200
	4	Gravity Chute	$ 4,050	25	$ 162
		Compactor	15,000	10	1,500
		Total	$ 19,050		$1,660

TABLE IV-5 ESTIMATED DAILY LABOR REQUIREMENTS AND COSTS OF SYSTEMS 2 AND 3

	Hall of Records	Hall of Administration	County Courthouse
REQUIREMENTS OF WASTE SYSTEM:			
Unit System (Man Hrs.)	52.9	85.0	56.6
Inter-Unit System (Man Hrs.)	1.0	1.0	1.0
Total System (Man Hrs.)	53.9	86.0	57.6
ESTIMATED LABOR COSTS:			
Unit System	$ 196	$ 315	$ 210
Inter-Unit System	$ 5	$ 5	$ 5
Total System Cost	$ 201	$ 320	$ 215
Cost/Ton	$ 402	$ 250	$ 246
Cost/Pound	$0.201	$0.125	$0.123

Note: Above cost summary does not include off-site system costs which are expected to remain generally constant.

Note: Present labor costs are not expected to be affected in System 1.

TABLE IV-6 ESTIMATED DAILY LABOR REQUIREMENTS AND COSTS OF SYSTEM 4

	Hall of Records	Hall of Administration	County Courthouse	County Engineers
REQUIREMENTS OF WASTE SYSTEM:				
Unit System (Man Hrs.)	52.9	85.0	56.6	37.6
Inter-Unit System (Man Hrs.)	2.0	2.0	2.0	1.0
Total System (Man Hrs.)	54.9	87.0	58.6	38.6
ESTIMATED LABOR COSTS:				
Unit System	$ 196	$ 315	$ 210	$ 139
Inter-Unit System	$ 7	$ 7	$ 7	$ 4
Total System Cost	$ 203	$ 322	$ 217	$ 143
Cost/Ton	$ 406	$ 252	$ 248	$ 340
Cost/Pound	$0.203	$0.126	$0.124	$0.170

Note: Above cost summary does not include off-site system costs which are expected to remain generally constant.

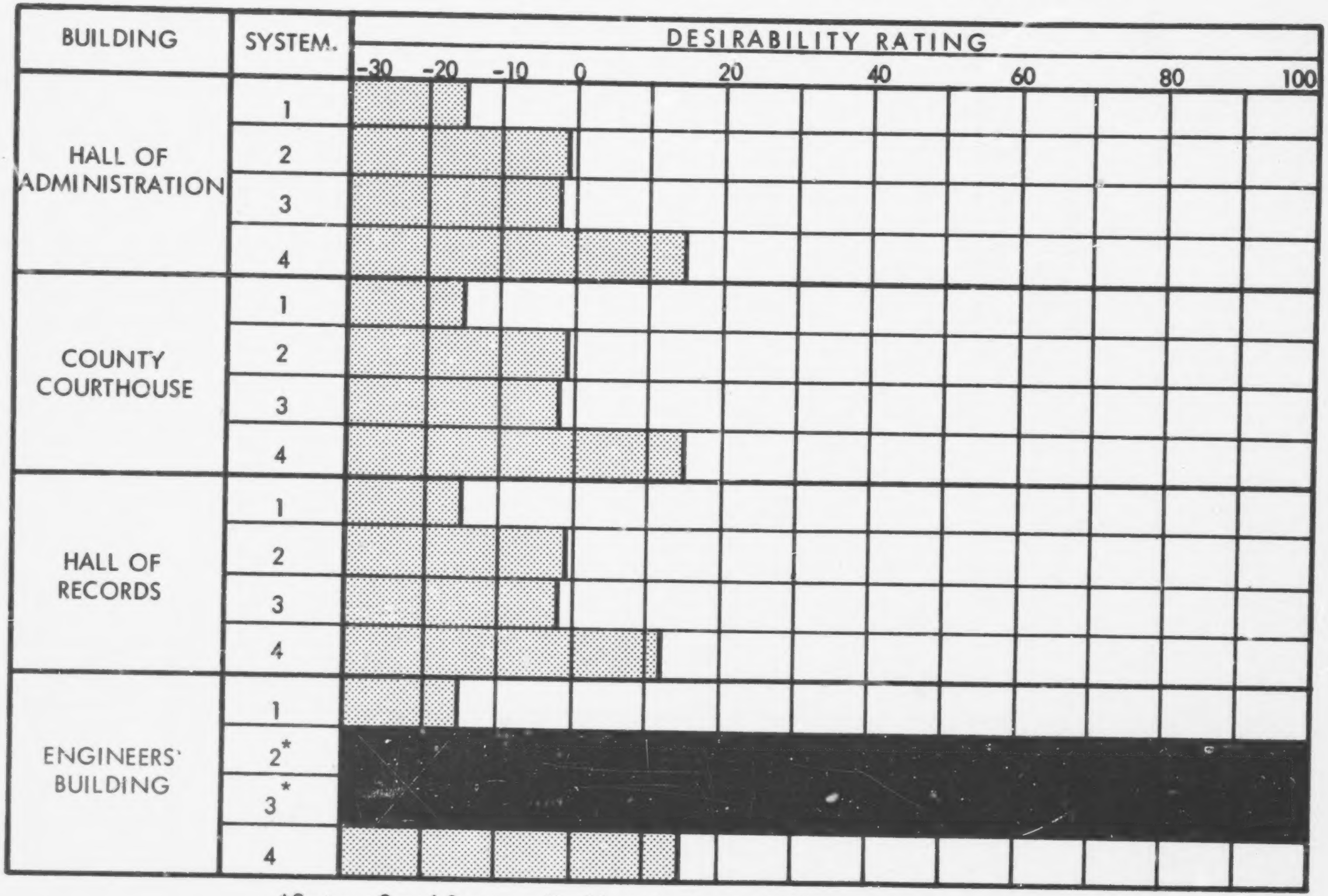
Note: Present labor costs are not expected to be affected in System 1.

TABLE IV-7 ECONOMIC EVALUATION OF SOLID WASTE SYSTEM MODIFICATIONS

OFFICE BUILDING	ITEM	SYSTEM							
		1		2		3		4	
HALL OF ADMINISTRATION	I INVESTMENT								
	Installed Cost of Project	$ 12,000		$137,500		$150,000		$ 19,050	
	Investment Released or Avoided by Project								
	Net Investment Required	$ 12,000		$137,500		$150,000		$ 19,050	
	II OPERATING ADVANTAGE								
	DIRECT EFFECT OF PROJECT	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease
	Labor		$ 0		$6,350		$6,350		$5,385
	Maintenance	$ 60		$ 690		$ 750		$ 100	
	Materials and Supplies	90		1,030		1,125		150	
	Power	1,090		1,000		1,550		1,245	
	Floor Space		$ 600		$ 600		$ 600		$ 600
	Net Increase or Decrease in Operating Costs	$- 640			$4,230		$3,525		$4,490
	III COMPUTATION OF DESIRABILITY RATING								
	Total Advantage	$- 640		$ 4,230		$ 3,525		$4,490	
	Depreciation	1,200		5,875		7,125		1,660	
	Return on Investment	$-1,840		$-1,645		$-3,600		$2,830	
	Desirability Rating	-15		-1		-2		15	
COUNTY COURTHOUSE	I INVESTMENT								
	Installed Cost of Project	$ 12,000		$137,500		$150,000		$ 19,050	
	Investment Released or Avoided by Project								
	Net Investment Required	$ 12,000		$137,500		$150,000		$ 19,050	
	II OPERATING ADVANTAGE								
	DIRECT EFFECT OF PROJECT	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease
	Labor		$ 0		$6,350		$6,350		$5,385
	Maintenance	$ 60		$ 690		$ 750		$ 100	
	Materials and Supplies	90		1,030		1,125		150	
	Power	1,090		1,000		1,550		1,245	
	Floor Space		$ 600		$ 600		$ 600		$ 600
	Net Increase or Decrease in Operating Costs	$- 640			$4,230		$3,525		$4,490
	III COMPUTATION OF DESIRABILITY RATING								
	Total Advantage	$- 640		$ 4,230		$ 3,525		$4,490	
	Depreciation	1,200		5,875		7,125		1,660	
	Return on Investment	$-1,840		$-1,645		$-3,600		$2,830	
	Desirability Rating	-15		-1		-2		15	
HALL OF RECORDS	I INVESTMENT								
	Installed Cost of Project	$ 12,000		$141,100		$153,600		$ 22,650	
	Investment Released or Avoided by Project								
	Net Investment Required	$ 12,000		$141,100		$153,600		$ 22,650	
	II OPERATING ADVANTAGE								
	DIRECT EFFECT OF PROJECT	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease
	Labor		$ 0		$6,350		$6,350		$5,385
	Maintenance	$ 60		$ 690		$ 750		$ 100	
	Materials and Supplies	90		1,030		1,125		150	
	Power	1,090		1,000		1,550		1,245	
	Floor Space		$ 600		$ 600		$ 600		$ 600
	Net Increase or Decrease in Operating Costs	$- 640			$4,230		$3,525		$4,490
	III COMPUTATION OF DESIRABILITY RATING								
	Total Advantage	$- 640		$ 4,230		$ 3,525		$4,490	
	Depreciation	1,200		6,020		7,270		1,810	
	Return on Investment	$-1,840		$-1,790		$-3,745		$2,680	
	Desirability Rating	-15		-1		-2		12	
ENGINEERS BUILDING	I INVESTMENT								
	Installed Cost of Project	$ 12,000						$ 19,050	
	Investment Released or Avoided by Project								
	Net Investment Required	$ 12,000						$ 19,050	
	II OPERATING ADVANTAGE								
	DIRECT EFFECT OF PROJECT	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease
	Labor		$ 0						$5,385
	Maintenance	$ 60						$ 100	
	Materials and Supplies	90						150	
	Power	1,090						1,245	
	Floor Space		$ 600						$ 600
	Net Increase or Decrease in Operating Costs	$- 640							$4,490
	III COMPUTATION OF DESIRABILITY RATING								
	Total Advantage	$- 640						$4,490	
	Depreciation	1,200						1,660	
	Return on Investment	$-1,840						$2,830	
	Desirability Rating	-15						15	

Note: Term "Desirability Rating" is synonymous with percent of return on investment.

FIGURE IV-1 COMPARISON OF ECONOMIC DESIRABILITY OF SYSTEMS



*Systems 2 and 3 not applicable at Engineers Building

SUMMARY

In review of the foregoing evaluations of system modifications, Table IV-8 was prepared in summary of these findings, showing comparisons of system deficiencies, investment requirements and the increase or decrease in annual costs.

Based on investment requirements and the effect on annual costs of operation, basic interim improvements in these types of building systems could be accomplished most practically through the installation of stationary packers at slight additional annual cost. Installation of gravity chutes in existing buildings should be considered in future building modification plans.

It is likely that a pneumatic collection system and central processing station serving a number of buildings such as exist in the Civic Center complex could prove economically feasible, providing broad participation could be achieved. In the case of the Civic Center complex, this would likely require joint participation of Federal, State, County and City agencies occupying the numerous governmental buildings in the area and perhaps participation of private enterprise buildings on the perimeter of this complex. It is beyond the scope of this project to investigate such potentials further, but this concept is recommended for consideration in planned expansions of the Civic Center and in the planning stage of similar new complexes.

Comparison of Office Building Solid Waste Systems

TABLE IV-8 EFFECT OF SYSTEM MODIFICATIONS

	Hall of Records	Hall of Administration	County Courthouse	County Engineers
COMPARISON OF SYSTEM DEFICIENCIES				
Existing System	31%	41%	37%	42%
Considered System Modifications:				
System 1	24%	24%	24%	24%
System 2	20%	20%	20%	--
System 3	6%	6%	6%	--
System 4	24%	24%	24%	24%
EXISTING ANNUAL OPERATING COST	$ 65,385	$103,708	$ 70,617	$42,717
COSTS OF SYSTEM MODIFICATIONS:				
System 1 - Total Investment	$ 12,000	$ 12,000	$ 12,000	$12,000
*Annual Cost	1,840	1,840	1,840	1,840
System 2 - Total Investment	$137,500	$137,500	$141,100	--
*Annual Cost	1,645	1,645	1,790	--
System 3 - Total Investment	$150,000	$150,000	$153,600	--
*Annual Cost	3,600	3,600	3,745	--
System 4 - Total Investment	$ 19,050	$ 19,050	$ 22,650	$19,050
*Annual Cost	(2,830)	(2,830)	(2,680)	(2,830)

*Increase or decrease ( ) over annual operating costs of the existing solid waste system, including annual depreciation expense for buildings and equipment, but, excluding interest expense and any additional off-site disposal costs that may be assessed.

CHAP. V REVIEW OF STUDY

Page No.

HOSPITAL WASTE SYSTEMS V-1

DETENTION FACILITY WASTE SYSTEMS V-3

OFFICE BUILDING WASTE SYSTEMS V-3

The findings of this study have confirmed general inadequacies that prevail, both in (1) the operation of conventional solid waste systems and (2) the development and/or use of hardware that can upgrade operating standards.

HOSPITAL WASTE SYSTEMS

In the hospitals inspected, both locally and throughout the country, significant deficiencies exist in the in-plant system as well as off-site disposal. Based on the detailed investigations of local institutions, those deficiencies, relating to the environmental aspects of in-plant handling and storage of wastes, are tolerated daily, while generally incurring high costs of operation. Mechanized and automated handling systems currently exist and are being tested and improved. Although relatively high in capital costs, these systems will likely provide overall economy in annual operating costs for many small and large institutions. Pneumatic conveyor systems for handling soiled linens and disposable wastes have the greatest potential for adaptation in existing buildings. The pneumatic system and conveyor systems for sealed container transfer both hold merit for use in buildings in the planning stage. The latter has the added flexibility of handling the distribution of clean supplies as well as soiled materials and wastes. However, it is also likely that economically the latter could not be justified unless it is in fact designed to handle all types of these materials. Both types of systems will afford similar improvements in operating standards in that material movements are accomplished in a closed transport system, minimizing exposure within the plant as well as minimizing interim storage requirements.

The deficiencies existing in on-site processing and disposal are largely due to lack of investment in proper equipment and/or operating personnel. However, types of equipment that can provide satisfactory processing are limited. Incineration is the only proven method of on-site disposal that is widely used. In many cases, on-site incinerators with reasonable capabilities are improperly operated. Similarly, many on-site installations exist that are not capable of handling the loads imposed on them or being operated to meet local standards, even if there were qualified operators. Both incinerator design and operation are highly complex. Although the importance of design engineering is now generally recognized, specialized training of operators is not. The industry is capable of designing incinerators to meet the most stringent standards. In the larger metropolitan areas where air pollution conditions are severe, the more sophisticated control devices will likely be required in order to meet local standards. However, it presently appears economically and/or technologically infeasible that such devices can be adapted to the smaller on-site incinerators based on lack of such equipment in this waiting market. Further, in view of the severity of air pollution conditions that exist in such areas as the Los Angeles Basin, where progressively restrictions are necessarily being strengthened on air pollution, incineration cannot be recommended. Except in such extreme cases, a properly designed incinerator with qualified operators is the only currently proven method of on-site disposal that could be recommended, whereby materials can be reduced and converted to an innocuous state, microbiologically safe for off-site transfer and disposal.

Alternative methods of on-site processing investigated that would properly condition waste materials were all centered around pulping or wet grinding. It was concluded that such processing, followed by sterilization and dewatering, would provide adequate conditioning for off-site transfer and disposal. Similarly, it was considered that the environment would not be further exposed to contamination if, following the pulping process, the material were discharged to the sewers, utilizing an already contaminated channel for transport. Various types of wet grinding and pulping equipment of various capacities are presently available and being improved. Such equipment can be sized for small and large installations. Sterilization processes and equipment specifically designed for handling of unselected solid wastes are non-existent. However, certain processes may be adapted for this need. Capabilities of the sewers for pipeline transport of additional non-settleable solids appear to be adequate if the materials are properly introduced. Chief concern with this method, employing sewer transport, is the ultimate effect of solid loadings on conventional sewage treatment plants, water reclamation and modifications in treatment processes that may be required.

Considering the local conditions of the Los Angeles Basin area, and the dilemma facing the hundreds of hospitals, nursing homes, clinics, etc., all generating similar wastes and having similar problems in the control of processing and disposal of these materials, the need for detailed studies of pulping and wet grinding was considered warranted. This study appeared fully justified when considering that improving standards of handling and disposal of hospital wastes is a growing national problem.

Further development of this concept suggested that a pilot project be developed of sufficient scale to prove meaningful under a wide range of conditions. Inasmuch as successful experimentations have been carried out on small scale projects, it is necessary that this project be of sufficient scope to test the full range of disposal methods connected with the wet grinding or pulping process.

Based on these qualifications and the total findings of this study, the project concept was further developed, and the LAC-USC Medical Center was recommended as the site for this project. This proposed project, as fully detailed in the following chapter, will hopefully contribute towards the ultimate improvement of operating standards of hospital solid waste systems.

DETENTION FACILITY WASTE SYSTEMS

The observation and evaluation of existing solid waste systems in local detention facilities indicated that principal in-plant deficiencies occur in central storage. Manual in-plant housekeeping functions, including the collection and transfer of solid wastes to central storage, are generally performed by inmate work details. Changes in the manner of performance of these internal functions are not considered feasible and quality of such performance is subject to the enforcement of standards by staff and supervisors.

Mechanization of any portion of the solid waste system, subject to abuse by inmate operators, should be avoided. Although mechanical processing devices such as stationary compactors would improve central storage conditions, reliable functioning could be expected only if operated and maintained by a qualified employee. As a practical matter, improvements in detention facility waste systems can be expected only through enforcement of standards by staff and supervisors.

OFFICE BUILDING WASTE SYSTEMS

In those office buildings investigated in the Civic Center, only minor deficiencies were found in the elements of storage and off-site disposal. Generally, in-plant supervision is effective in maintaining good operating standards. In-plant deficiencies that occur are primarily due to lack of equipment for confinement and reduction of collected waste materials.

Interim improvements in these systems will require adoption of higher standards of operation with accompanying increase in annual costs. Basic improvements can be accomplished with the installation of manually fed stationary compactor units. Further improvements can be accomplished with chute installations directly feeding the compactor units.

Long range improvements, involving chute installations in each building connected with a central pneumatic conveyor system and processing station, should be considered in planned expansions in the Civic Center complex and in the initial design stages of similar complexes.

The proposed project recommended for the LAC-USC Medical Center will determine the feasibility of such systems and the results should also be evaluated from the viewpoint of application to office building complexes.

VOL. IV SELECTION AND DESIGN OF SOLID WASTE SYSTEMS
CHAP. VI PROPOSED PILOT PROJECT

Page No.

SCOPE OF PROJECT VI-1

PROJECT OBJECTIVES VI-3

CONSTRUCTION PROGRAM VI-4

IMPLEMENTATION SCHEDULE VI-5

DESIGN CONCEPT VI-7

PRELIMINARY PLANS VI-8

DESCRIPTION OF THE SYSTEM OPERATION VI-12

OPERATING CHARACTERISTICS - Wet Pulping System VI-16

OPERATING CHARACTERISTICS - Mechanical Conveyors VI-18

OPERATING CHARACTERISTICS - Wet Air Oxidation System VI-19

OPERATING CHARACTERISTICS - Experimental Sewage
  Treatment Plant VI-20
  Design Criteria VI-20

ESTIMATED ANNUAL OPERATING COSTS VI-22

ESTIMATED CONSTRUCTION COSTS VI-24

BENEFITS OF THE SYSTEM VI-27

RECOMMENDATIONS FOR IMPLEMENTATION VI-33

Page No.

LIST OF TABLES

VI-1 Solid Waste Classification VI-17
VI-2 Annual Operating Costs of Project Facilities VI-22
VI-3 Estimated Daily Labor Costs of the Modified Waste System LAC-USC Medical Center VI-23
VI-4 Estimated Construction Costs VI-25
VI-5 Tangible Economic Benefits VI-28
VI-6 Numerical Rating of Proposed Solid Waste System LAC-USC Medical Center VI-29
VI-7 Percentage Deficiencies of Sub-System Functions VI-31

LIST OF FIGURES

VI-1 Estimated Schedule of the Continuing Program VI-6
VI-2 Schematic of Inter-Building Solid Waste System (Existing) VI-9
VI-3 Proposed Refuse Processing Plant - LAC-USC Medical Center VI-10
VI-4 Proposed Refuse Processing Plant - LAC-USC Medical Center VI-11
VI-5 Diagrammatic Chart - Refuse Processing Plant VI-14
VI-6 Comparison of Percentage Deficiencies of Sub-System Functions - LAC-USC Medical Center VI-32

The earlier volumes of this study have provided a summary of the total study, a detailed study and evaluation of existing waste systems in selected building complexes and an investigation of available equipment for system improvements. In the preceding section of this volume, an evaluation of considered system improvements was made at each of the selected building complexes. Upon review of these evaluations, one of these complexes, the LAC-USC Medical Center, was selected for continuing study and as the site for construction of the recommended system to be tested.

The proposed waste system for this project involves pneumatic transport of disposable wastes and reusable linens employing a single tube pneumatic conveyor system. This proposed system also will contain a central pulping station for disposable materials, a wet oxidation process and an experimental sewage treatment plant. Optional processes and disposal methods available include discharge of raw or sterilized pulped wastes to sewers, transport of dewatered raw or sterilized pulped wastes to landfills, nearly complete oxidation of pulped wastes with discharge of residue to sewers or dewatered residue to landfills or emergency bypassing of all processes with direct discharge of bulk wastes to a compuctor for disposal at landfills.

The Medical Center project permits a full range of observations and tests on sterilization of pulped wastes, effects of raw or sterilized pulped wastes on various sewage treatment processes, recovery of cellulose by the wet oxidation process and numerous other activities noted in the scope and objectives of the project.

SCOPE OF PROJECT

The project includes the design, construction and operation of the proposed solid waste system, together with an extensive program of observations, sampling, analysis, and testing. This program will determine the adequacy of each item of equipment to fulfill its function properly and any modifications that may be needed to improve its operation. Careful records of operating and maintenance cost will be maintained and any improvements in related services will be observed to evaluate properly the economic impact resulting from the installation.

Tests will be conducted and observations made to determine the improvement in environmental conditions as related to the handling of waste materials and the disposal of refuse. Microbiological air samples will be taken in the vicinity of laundry and refuse chutes, in service tunnels and at the inlet of the conveying system to determine improvement achieved through the installation of the system. Similar tests will be made on the discharge of the exhaust filters from the conveying system, at the pulping units to determine the level of aerosol contamination at these points, and the need, if any, of modifying these installations. Evaluations will be made on the effectiveness of a single tube pneumatic conveying system for transport of disposable wastes and reusable linen.

Physical inspections will be made of the sewers into which pulped refuse is discharged to determine the condition of the sewers, quantities and type of deposits, septic conditions, etc. both above and at intervals below the point of discharge of pulped waste before commencing such discharge and at intervals during the program.

Measurements will be made of sewage flows above and at intervals below the point of discharge of the pulped waste, together with the quantities of pulped waste discharged into the sewers. Measurements will also be made of the quantities of refuse delivered to the waste processing plant, the volume and weight of non-pulpable wastes removed, the amounts of electric power or other fuel consumed, and the quantities of water required.

Physical, chemical and bacterial analyses will be made periodically on samples of the pulped refuse and sewage samples taken above and at intervals below the point of discharge into the sewer to determine the effect of such discharge on the characteristics of the sewage and to the effect on water reclamation.

Tests, including chemical and bacterial analyses, will be conducted on the wet oxidation process to determine the temperature-pressure-time relationship required to sterilize, to oxidize completely or to oxidize sufficiently to permit the recovery of cellulose fiber from varying concentrations of pulped refuse or from varying mixtures of pulped refuse and sewage sludge as would be encountered in a municipal sewerage system if pulped solid waste were admitted on a general or restricted basis.

Tests will be conducted on the stability of the dewatered cake from the wet oxidation process, extent of the reduction of solids and upon the feasibility of recovery of a useable cellulose fiber. Tests will also be conducted on the amenability of the filtrate to conventional sewage treatment processes, either alone or mixed with varying amounts of domestic sewage and on the amenability of various mixtures of pulped refuse and sewage to treatment by conventional or other means.

PROJECT OBJECTIVES

Broadly, the objectives of this program are to develop operating procedures and performance standards and determine operational reliability of the designed system, together with an evaluation of the environmental improvements and economic benefits that may be derived from such projects. These objectives are further expanded as follows:

1. To demonstrate the savings in cost and improvement in environmental conditions in a hospital complex through the installation of a pneumatic conveying system for handling soiled and contaminated materials from hospital floors.

2. To demonstrate the practicality of using sewage as the fluid for pulping and transportation of pulped hospital wastes, and to determine what preconditioning of the sewage, if any, is needed before use in the pulper.

3. To demonstrate the practicality and costs of disposing of pulped hospital wastes in a sanitary sewerage system and the savings in cost thereby.

4. To determine the extent of wet oxidation required and the costs of such processes to sterilize effectively a pulped contaminated hospital waste.

5. To determine the effect of wet oxidation of pulped hospital wastes and the effect of residue discharged into sanitary sewerage systems.

6. To determine the extent of wet oxidation necessary to produce a stable and sterile dewatered pulp and to determine the costs of such processes.

7. To determine the extent of wet oxidation necessary to recover a useable cellulose pulp from pulped hospital waste and the costs of such processes, as well as the practicality of recovering a commercially valuable cellulose pulp from a mixed sewage sludge and pulped waste as might be obtained from the general discharge of pulped solid wastes into the sanitary sewerage system.

8. To determine the quantities and characteristics of non-pulpable hospital wastes and processing required for their safe and proper disposal, as well as the cost.

9. To determine the effect of adding various quantities of pulped solid waste to sanitary sewage on both the primary and secondary units of conventional sewage treatment plants, including those employing both trickling filters and activated sludge or some of its more recent modifications.

10. To determine the effect of adding various quantities of pulped solid waste to sanitary sewage on sludge characteristics, including dewaterability and degradability under both mesophilic and thermophilic anaerobic conditions, as well as under aerobic conditions.

11. To determine the practicability of aerobic decomposition of dewatered pulped waste and sewage sludge through composting.

12. To determine what process or series of processes may be required to treat effectively the mixtures of sanitary sewage and pulped solid waste which might be anticipated in municipal sewerage systems should pulping of such wastes be generally adopted.

13. To evaluate the overall economic and environmental effects on a municipality from the general adoption of pulping as a method of solid waste disposal or of limiting it to contaminated hospital wastes.

14. To continue research on systems and equipment available for materials handling and solid waste disposal to take advantage of development work currently in progress.

15. To continue research on regulatory codes and restrictions and develop code modifications or guidelines for system design as may be required.

16. To provide documentation of project for educational purposes, such as photographic coverage, movies, other visual aids.

CONSTRUCTION PROGRAM

The construction program required for development of this solid waste system is estimated to be completed within the first year's period. Proposed construction of the basic components in this system that is necessary to carry out the project objectives is identified as follows:

1. A single tube pneumatic conveyor system for the collection of both soiled linens and refuse from the various treatment, service and housing units.

2. A central pulping station with discharge to sewers and optional disposal processes.

3. A wet oxidation plant for the oxidation and sterilization of the pulped contaminated waste.

4. A sewage pumping station to supply sewage to the pulpers.

5. A centrifuge or vacuum filter for dewatering oxidized pulp.

6. Experimental sewage treatment plant with capacity of 40,000 ± gpd and capable of treating various mixtures of pulped waste and sewage by both conventional and non-conventional means.

7. Laboratory and auxiliary equipment required for the operation of the system and carrying out the project objectives.

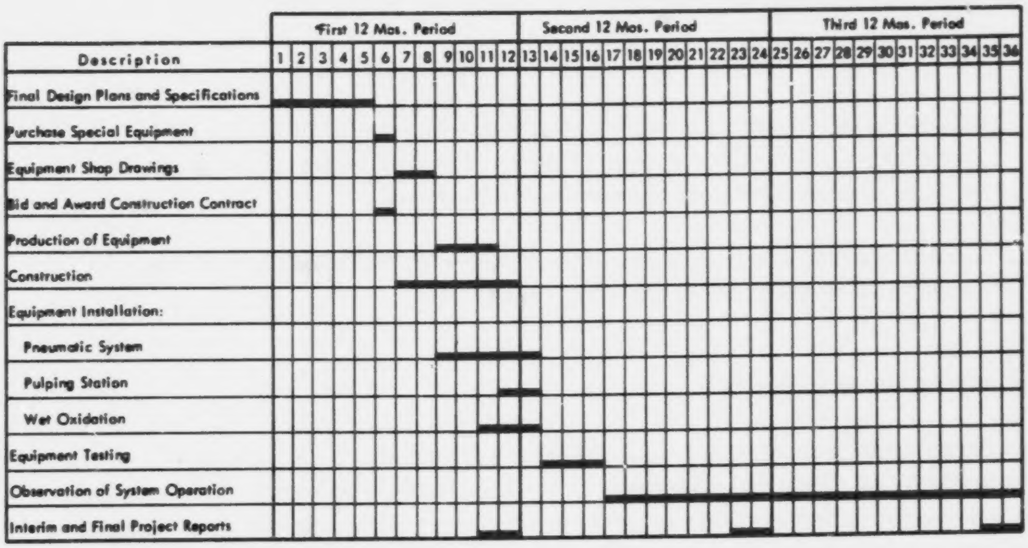
IMPLEMENTATION SCHEDULE

The proposed program is planned over a three-year period. Progress made during preliminary planning indicates it is entirely feasible to expect final design plans and specifications on these projects to be completed during the first six-month period and construction to be accomplished during the remaining portion of the first year. It is also feasible that certain phases of mechanical design of special equipment components can be accelerated in order that their production and delivery for installation will coincide with the construction schedule.

It is anticipated that a period of three to four months during the second year should be allowed for equipment testing and a transition period at the Medical Center project, before full operation should be expected. Within the proposed three-year program, an estimated period of approximately the final twenty months will be available for detailed observations, testing and systems evaluation under full operating conditions. This would appear as a reasonable period in which to accomplish the ultimate objectives of the proposed project.

This proposed implementation schedule is graphically illustrated in Figure VI-1, which details principal items occurring during the program period.

FIGURE VI-1 ESTIMATED SCHEDULE OF THE CONTINUING PROGRAM



*Division of first period into separate Design and Construction Phases will likely extend these activities by approximately 90 days.

DESIGN CONCEPT

During the course of this study, from the evaluation of existing solid waste systems and considered improvements to these systems, the broad concept of a closed mechanical system, fully automated, capable of transporting all disposable and reusable waste materials and providing on-site disposal, appeared to be the optimum system. With the preceding studies, it also became apparent that varying limitations in each of the building complexes investigated would require certain compromises on system selection due to space limitations and existing area functions.

Combined evaluation of the economic and environmental aspects of various combinations of equipment indicated the optimum system for the LAC-USC Medical Center should be designed around a pneumatic transport system for the transport of soiled linens and disposable wastes, together with a central pulping station for processing disposable materials. These new system components or sub-systems would fully replace the present inter-building system and off-site system. Modifications of certain methods and equipment in the inter-unit system would also be required and collectively, these modifications would have a limited effect on methods and practices used in the unit system (patient care and service areas).

Personnel requirements of the improved system would generally be limited to the unit system, where emphasis on handling techniques and supervision could be confined to those initial handling functions prior to deposit of wastes in chutes. Those personnel involved in the mechanical system would be limited to qualified maintenance mechanics and operator classifications.

Local authorities in various County and City agencies concerned with environmental control approved of the basic concept. However, as design criteria were developed and the potential loading and characteristics of solids in the sewerage system became more apparent, concern was expressed about these factors and their ultimate effect on sewage treatment processes. It was recommended that the proposed basic waste system project be expanded to include an experimental sewage treatment plant and sludge processing (wet oxidation) unit, to provide facilities for on-site experimentation in order to evaluate fully the total disposal process.

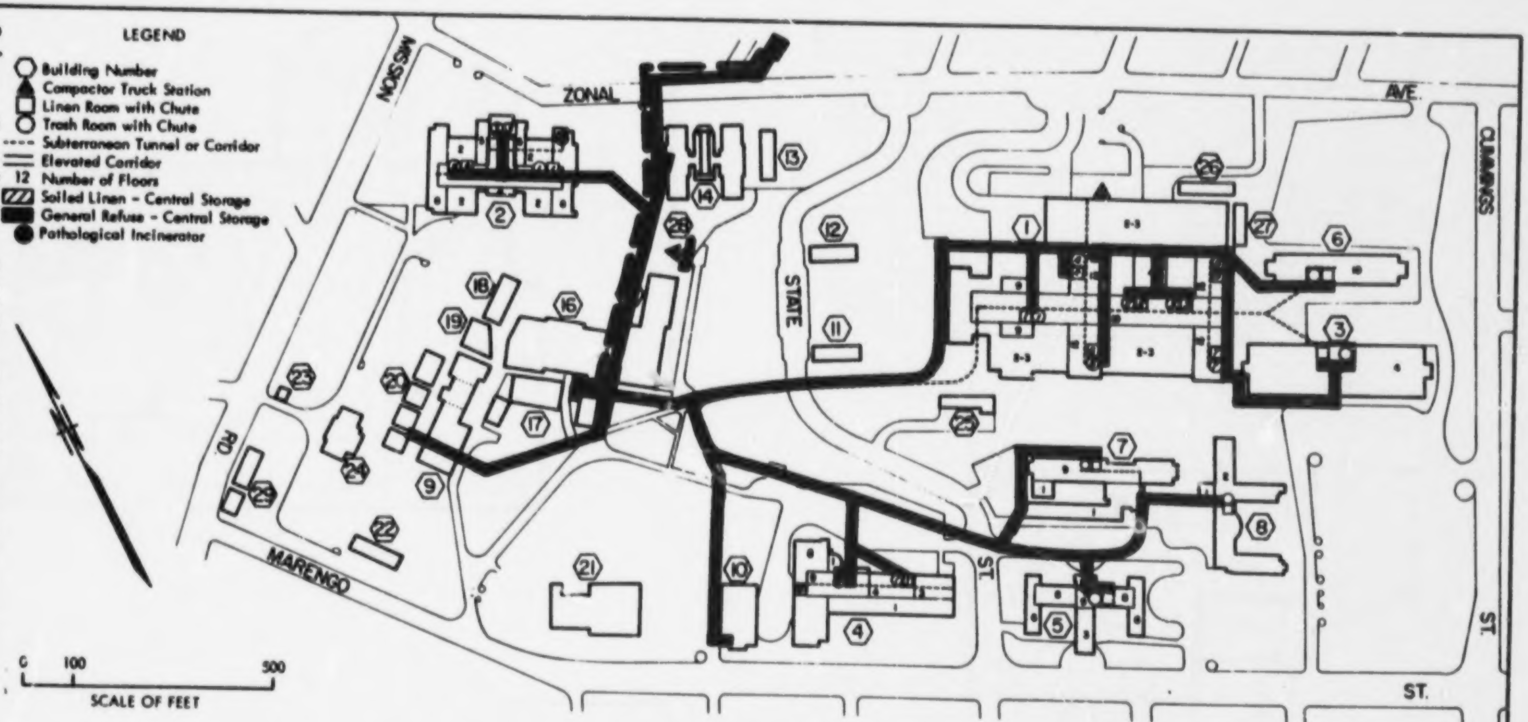
Preliminary plans were developed around this total concept. Although a substantial investment will be required for the basic solid waste system, anticipated annual savings in the operation of the improved new system would return the investment in a period of five to seven years excluding costs of the experimental sewage treatment plant. If depreciated over a nominal 25-year period, an annual direct savings or operating surplus (over present costs) of about $354,000 would be available for redistribution to patient-care functions or other needed improvements. In addition to these direct savings, it is estimated that substantial indirect benefits though difficult to estimate would likely accrue as a result of improved health and safety standards, both in the hospital plant and the community at large.

PRELIMINARY PLANS

The above briefly summarizes certain of the background material preceding the preliminary design phase of the proposed system. To reorient the readers to the physical plant at LAC-USC Medical Center, Figure VI-2 illustrates the existing building layout and relates certain features of the existing solid waste system. The schematic routing of the proposed pneumatic conveyor system has been superimposed on this plan showing the approximate piping network that would be situated on the main hospital parcel. The extension of this pipeline across Zonal Avenue terminates at the proposed location of the waste processing plant. This site was selected as the most suitable location for the plant by hospital representatives and their master planning consultant. Figure VI-4 suggests configuration of the plant facilities.

Implementation of the proposed solid waste system will involve construction of a permanent new building to accommodate equipment installations, the control room, office and laboratory services which comprise the central waste processing plant and accessory structures and assemblies. Structures of the experimental sewage plant will be located adjacent to the waste processing plant.

This basic plant as proposed and illustrated in Figures VI-3 and VI-4 will accommodate the pneumatic system discharge hoppers, exhaustors and bacteriological filters, a twin pulper installation with provisions for the addition of a third unit, the wet oxidation equipment, conveying equipment and other accessories to these various processes. In addition, a control room for the pneumatic system, conveying equipment, pulping process and wet oxidation process, together with an office, laboratory and employee facilities are located on the upper floor level with access provided by both elevator and stairs. Contaminated areas within the plant are confined to the


LEGEND
Building Number
Compactor Truck Station
Linen Room with Chute
Trash Room with Chute
Subterranean Tunnel or Corridor
Elevated Corridor
12 Number of Floors
Soiled Linen - Central Storage
General Refuse - Central Storage
Pathological Incinerator
MISSION
ZONAL
AVE.
CUMMINGS
ST.
STATE
ST.
MARENGO
RD.
ST.
0
100
500
SCALE OF FEET
1
2
3
4
5
6
7
8
9
10
11
12
13
14
16
17
18
19
20
21
22
23
24
25
26
27
28
29

Schematic of Inter-Building Solid Waste System- (Existing)

FIGURE VI-2

BUILDING SCHEDULE

Bldg. No.	Function	No. Floors	Area (SF)	Bldg. No.	Function	No. Floors	Area (SF)	Bldg. No.	Function	No. Floors	Area (SF)	Bldg. No.	Function	No. Floors	Area (SF)
1	Unit I - Acute	19	1,285,000	9	Pharmacy	6	55,000	16	Laundry	2	55,200	23	Gate House	1	2,400
2	Unit II - O.B. & Gyn.	9	376,110	10	General Laboratory	3	33,000	17	Shops	1	12,200	24	Admin. (Hosp. Dept.)	4	30,600
3	Outpatients	4	209,000	11	Chaplain	1	2,750	18	Research Building	3	14,500	25	Telephone Exchange	2	6,160
4	Pediatrics & C.D.	8	171,075	12	Patient Identification	1	2,725	19	Garage	2	6,160	26	Storage	1	2,940
5	Psychiatric	9	132,000	13	Research Building	1	22,000	20	Storage	1	4,100	27	Storage	1	2,270
6	Interns Residence	10	139,000	14	Clinical Research	4	61,000	21	Steam Plant	-	--	28	Incinerator	-	--
7	Nurses Res. & Classrooms	9	171,620	15	Power House	-	--	22	Cancer Research	2	10,200	29	Classrooms	1	2,000
8	Nurses Residence	2	46,000												

SCHEMATIC OF PROPOSED INTER-BUILDING COLLECTION SYSTEM AND CENTRAL DISPOSAL PLANT

PNEUMATIC TUBE ▬▬▬

EXHAUST AIR TUBE ▬ ▬ ▬

CENTRAL DISPOSAL PLANT ■

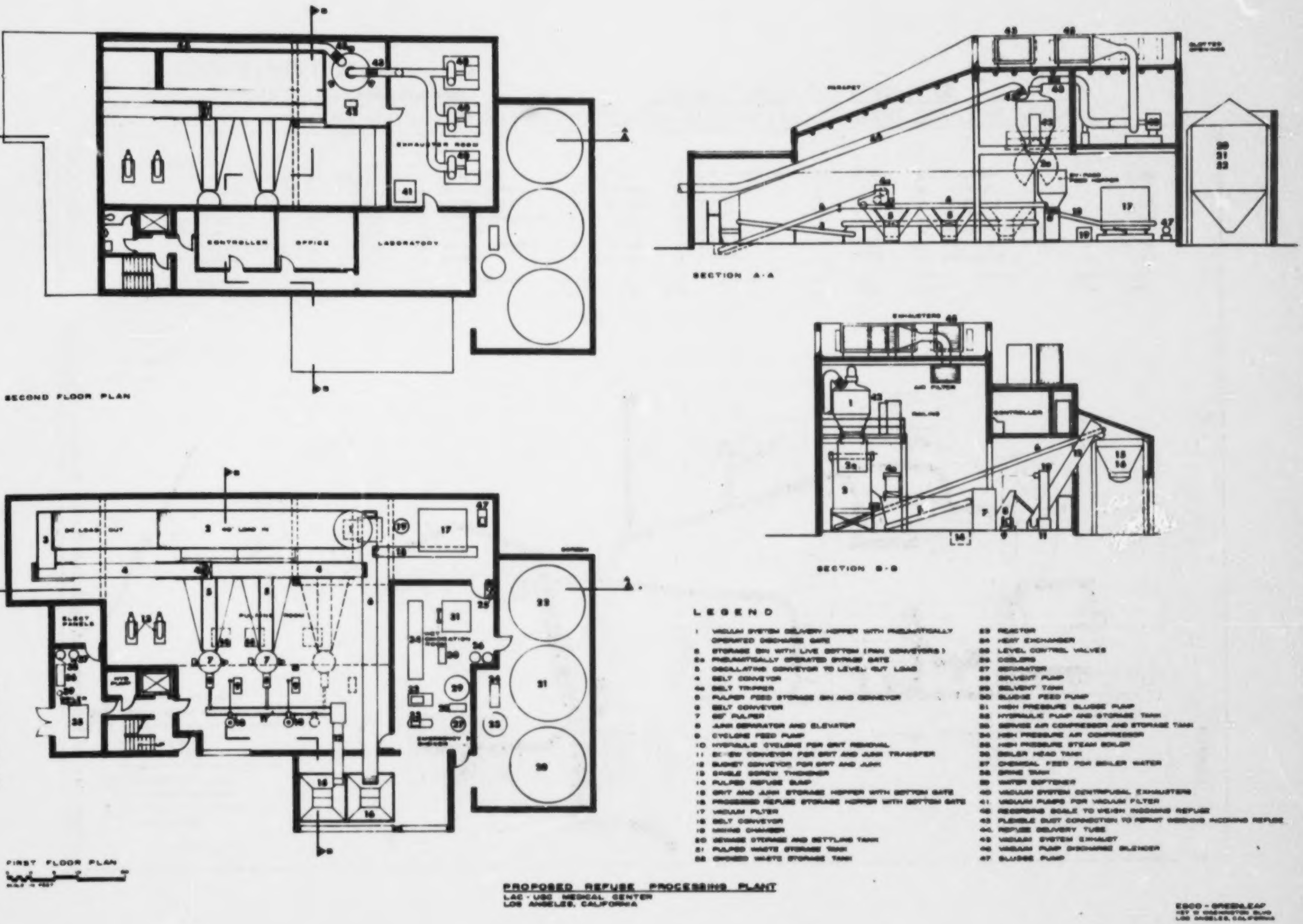
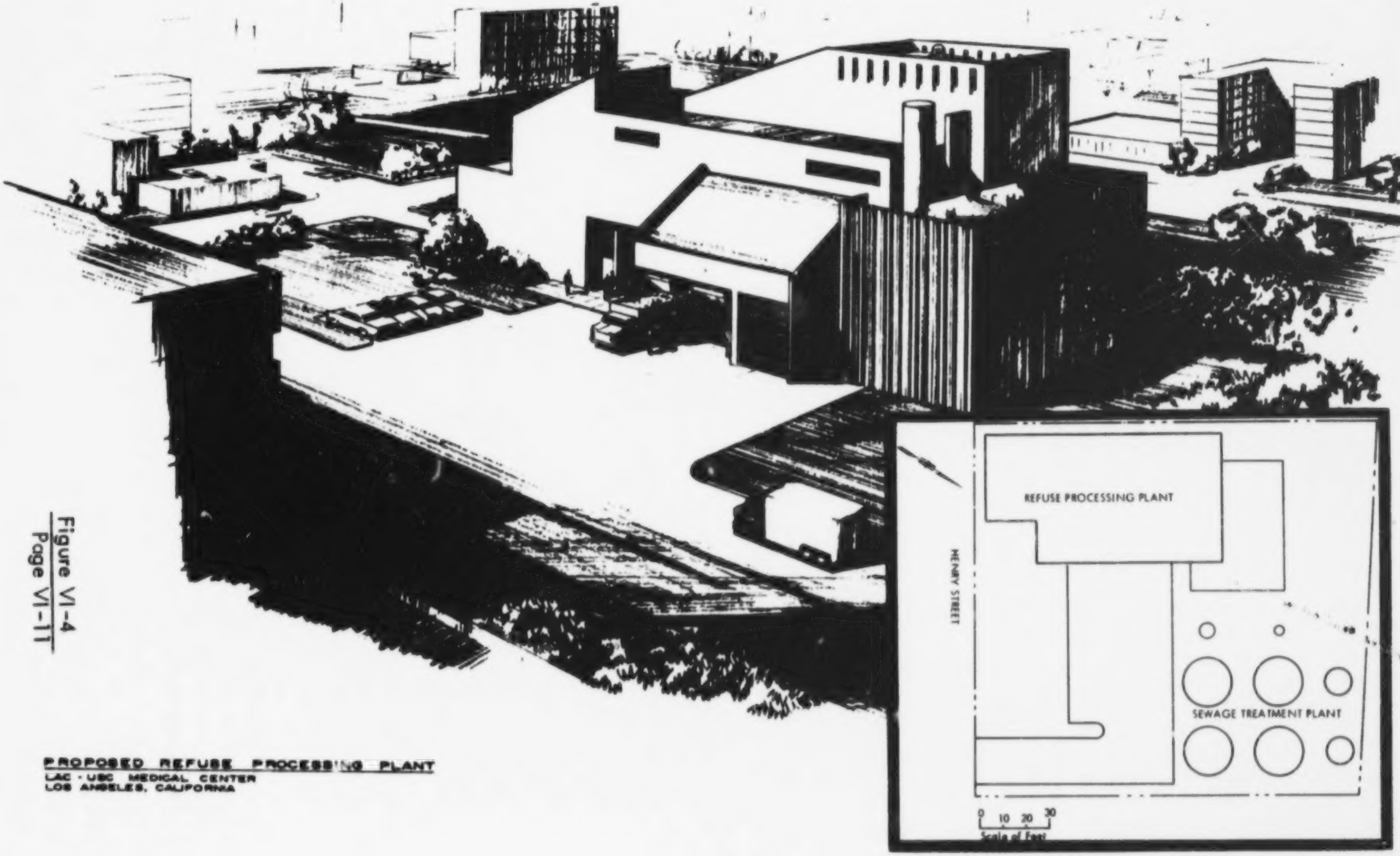

SECOND FLOOR PLAN
CONTROLLER
OFFICE
LABORATORY
EXHAUSTER ROOM
FIRST FLOOR PLAN
PULPING ROOM
ELECT PANELS
SECTION A-A
PARAPET
SLOTTED OPENINGS
SECTION B-B
EXHAUSTERS
AIR FILTER
RAILING
CONTROLLER
LEGEND
1 VACUUM SYSTEM DELIVERY HOPPER WITH PNEUMATICALLY OPERATED DISCHARGE GATE
2 STORAGE BIN WITH LIVE BOTTOM (PAN CONVEYORS)
2a PNEUMATICALLY OPERATED BYPASS GATE
3 OSCILLATING CONVEYOR TO LEVEL OUT LOAD
4 BELT CONVEYOR
4a BELT TRIPPER
5 PULPER FEED STORAGE BIN AND CONVEYOR
6 BELT CONVEYOR
7 60" PULPER
8 JUNK SEPARATOR AND ELEVATOR
9 CYCLONE FEED PUMP
10 HYDRAULIC CYCLONE FOR GRIT REMOVAL
11 SCREW CONVEYOR FOR GRIT AND JUNK TRANSFER
12 BUCKET CONVEYOR FOR GRIT AND JUNK
13 SINGLE SCREW THICKENER
14 PULPED REFUSE SUMP
15 GRIT AND JUNK STORAGE HOPPER WITH BOTTOM GATE
16 PROCESSED REFUSE STORAGE HOPPER WITH BOTTOM GATE
17 VACUUM FILTER
18 BELT CONVEYOR
19 MIXING CHAMBER
20 SEWAGE STORAGE AND SETTLING TANK
21 PULPED WASTE STORAGE TANK
22 OXIDIZED WASTE STORAGE TANK
23 REACTOR
24 HEAT EXCHANGER
25 LEVEL CONTROL VALVES
26 COOLERS
27 SEPARATOR
28 SOLVENT PUMP
29 SOLVENT TANK
30 SLUDGE FEED PUMP
31 HIGH PRESSURE SLUDGE PUMP
32 HYDRAULIC PUMP AND STORAGE TANK
33 SERVICE AIR COMPRESSOR AND STORAGE TANK
34 HIGH PRESSURE AIR COMPRESSOR
35 HIGH PRESSURE STEAM BOILER
36 BOILER HEAD TANK
37 CHEMICAL FEED FOR BOILER WATER
38 BRINE TANK
39 WATER SOFTENER
40 VACUUM SYSTEM CENTRIFUGAL EXHAUSTERS
41 VACUUM PUMPS FOR VACUUM FILTER
42 RECORDING SCALE TO WEIGH INCOMING REFUSE
43 FLEXIBLE DUCT CONNECTION TO PERMIT WEIGHING INCOMING REFUSE
44 REFUSE DELIVERY TUBE
45 VACUUM SYSTEM EXHAUST
46 VACUUM PUMP DISCHARGE SILENCER
47 SLUDGE PUMP
PROPOSED REFUSE PROCESSING PLANT
LAC - USC MEDICAL CENTER
LOS ANGELES, CALIFORNIA
ESCO - GREENLEAF
LOS ANGELES, CALIFORNIA

Figure VI-3


REFUSE PROCESSING PLANT
HENRY STREET
SEWAGE TREATMENT PLANT
0 10 20 30
Scale of Feet

PROPOSED REFUSE PROCESSING PLANT
LAC - USC MEDICAL CENTER
LOS ANGELES, CALIFORNIA

Figure VI-4

central storage and pulping process areas located on the lower level. Dense and inert materials removed by the dejunkers during the pulping process and grit removed by the hydraulic cyclones after pulping are washed and disinfected as they are conveyed to an exterior storage hopper in a screened enclosure. A second hopper in this same area provides storage of the sterile sludge cake after dewatering, or in emergencies (processing breakdown), unprocessed bulk wastes can be directly bypassed to the hopper for evacuation from the plant by compactor trucks.

DESCRIPTION OF THE SYSTEM OPERATION

The pneumatic conveyor system will provide transport service for accumulations of disposable wastes and soiled linen from forty-four loading stations on service levels. These stations include all existing gravity chutes and selected new loading stations.

The piping network required for connection of these stations to the laundry and disposal plant involves about 8,300 lineal feet of 20" diameter 1/4" steel pipe with flanged joints and epoxy lining. In addition to this basic transmission line, special discharge valves and valved air intake piping will serve each loading station.

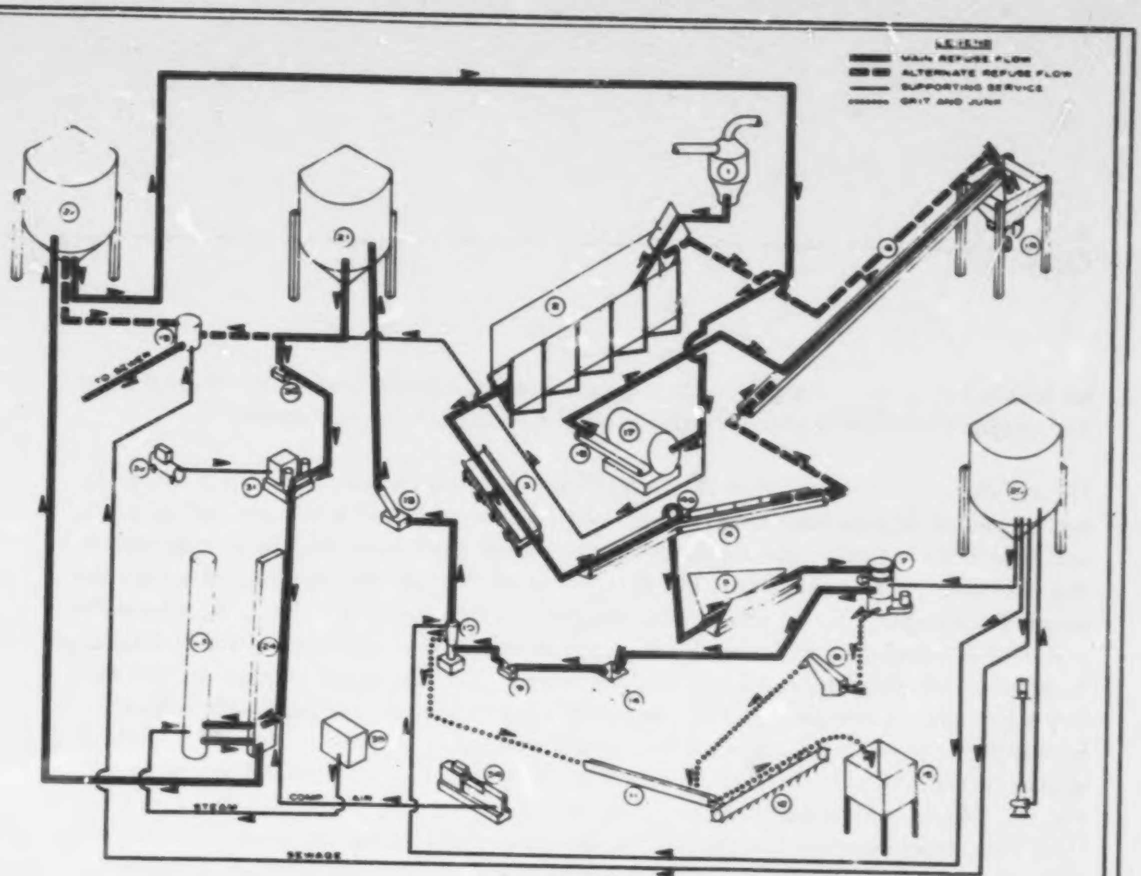
The system will operate on a time and/or demand basis, cycling disposable wastes and soiled linens alternately or as required. Exhaust air will be moved at a rate of about 10,000 cfm or 60 mph by 2-100 HP exhausters with a third 100 HP unit as standby. Evacuated materials will be deposited in collection hoppers at the waste processing plant and the laundry.

Each of the existing chutes will be under induced negative pressure by exhausting air at the rate of about 300 cfm. It is proposed to bleed off this volume continuously into the main transmission line and ultimately through the bacteriological filters at the waste processing plant.

Operation of the waste system (pneumatic conveyors and waste processing plant) will be largely automated. Monitoring devices and required manual override controls for all mechanical elements of the system will be housed in the central control room at the processing plant. A remote monitoring panel with alarm signal systems should be located by plant management as a supplementary control station to insure prompt and proper attention is given to operational malfunctions of the system.

Figure VI-5, a schematic flow diagram, illustrates the various processing functions and sequence of processes that are available in the proposed waste processing plant and identifies the principal equipment components contained therein or adjacent to the structure. This chart shows the flow of refuse through the various units from the pneumatic hopper No. 1, where it is weighed to storage hopper No. 16, where the material is transferred to trucks for disposal at landfills. Refuse material is discharged from receiving hopper No. 1 into storage hopper No. 2, where storage up to a full day's capacity is provided. This central storage hopper is equipped with a live bottom slat conveyor which feeds the waste material to conveyor No. 3. Oscillating conveyor No. 3 is provided to even out the load and the rate of feed to conveyor No. 4, which in turn delivers the refuse to pulper feed bins No. 5. The rate of feed from these bins can be adjusted to the rate at which the materials are being pulped in unit No. 7. Pulped material with about a 3% concentration of solids is delivered by gravity to sump No. 14, from which it in turn is pumped to the degritting unit No. 10, where ground glass, grit and bits of metal are separated from the pulp. The pulp then continues to concentrator No. 13, where sufficient water is removed to give an 8 to 10% consistency of pulp. This pulp is then delivered to storage tank No. 21. From tank No. 21, the pulp enters the wet oxidation system through sludge pump No. 30 and high pressure pump No. 31. It first passes through the heat exchanger No. 24, where it is heated by previously processed pulp before entering the reactor No. 23. In reactor No. 23, it is mixed with steam and compressed air and the material oxidized. From here it returns through the heat exchanger, where much of the heat is given up to the incoming material after which it passes to storage tank No. 22. From storage tank No. 22, the material is dewatered on vacuum filter No. 17 and then delivered via conveyors No. 18 and 6 to the storage hopper No. 16 for truck loading. Unpulpable material is removed from the pulping machine by junker No. 8 and from degritter and fed through conveyors No. 11 and 12 to the grit storage hopper No. 15. Here the material, after disinfection, will be loaded into trucks for disposal at landfills.

The layout of the plant will permit discharging a mixture of either sterilized or unsterilized pulp with sewage to the sewer system or to the experimental sewage treatment plant for further processing. Sewage for the operation of the plant and for the dilution of the pulped material before discharge into the sewerage system



DIAGRAMMATIC CHART — REFUSE PROCESSING PLANT

LEGEND

1. Vacuum system delivery hopper with pneumatically operated discharge gate.
2. Storage bin with live bottom (pan conveyor).
2a. Pneumatically operated bypass gate.
3. Oscillating conveyor to level out load.
4. Belt conveyor.
4a. Pneumatically operated deflector plate.
5. Pulper feed storage bin and conveyor.
6. Belt conveyor.
7. 60" pulper.
8. Junk separator and elevator.
9. Cyclone feed pump.
10. Hydraulic cyclone for grit removal.
11. Screw conveyor for grit and junk transfer.
12. Bucket conveyor for grit and junk.
13. Single screw thickener.
14. Pulped refuse sump.
15. Grit and junk storage hopper with bottom gate.
16. Processed refuse storage hopper with bottom gate.
17. Vacuum filter.
18. Belt conveyor.
19. Mixing chamber.
20. Sewage storage and settling tank.
21. Pulped waste storage tank.
22. Oxidized waste storage tank.
23. Reactor.
24. Heat exchanger.
25. Level control valves.
26. Coolers.
27. Separator.
28. Solvent pump.
29. Solvent tank.
30. Sludge feed pump.
31. High pressure sludge pump.
32. Hydraulic pump and storage tank.
33. Service air compressor and storage tank.
34. High pressure air compressor.
35. High pressure steam boiler.
36. Boiler head tank.
37. Chemical feed for boiler water.
38. Brine tank.
39. Water softener.
40. Vacuum system centrifugal exhausters.
41. Vacuum pumps for vacuum filter.
42. Recording scale to weigh incoming refuse.
43. Flexible duct connection to permit weighing incoming refuse.
44. Refuse delivery tube.
45. Vacuum system exhaust.
46. Vacuum pump discharge silencer.

Figure VI-5

will be taken from the City of Los Angeles sewer system by a small pumping station and pumped to storage tank No. 20, from which it will be used as needed. Sewage from this tank will also be used to feed the experimental sewage treatment plant.

The refuse storage and processing area has been laid out having in mind that this material is contaminated. Operations of this equipment will be controlled from a console in the control room on the second floor and it will not be necessary to have an operator in the refuse or pulping area during its operation.

Accessory equipment, such as flushing and/or steam cleaning devices will be provided for sanitizing processing, storage and conveyor equipment and work areas after daily use. A drainage system will carry off flushings to a sump for discharge to sewers.

Exhaustors for the vacuum collection system are located on the second floor along with the vacuum pump required for the operation of the vacuum filter. The discharge of these exhaustors is through filters located on the roof. These filters will be of a type capable of filtering out bacteria and will be arranged so that they may be sterilized prior to removal for cleaning. Air within the refuse storage and pulping area will be similarly filtered before discharge into the atmosphere.

Design provisions must be made for odor control within the processing plant and to reduce excessive noise to acceptable levels within and outside the plant.

OPERATING CHARACTERISTICS - Wet Pulping System

Principal components of the wet pulping system include two pulpers with junk separators and elevators, two cyclone feed pumps, two degritters and two concentrators. The system shall be capable of pumping the slurry through at least 150 feet of pipe and elevating the slurry by at least 15 feet.

Each pulper shall be capable of processing 12,000 pounds per day of a mixture Class I waste, Class IA waste, and Class II waste, as specified in Table VI-1. The pulpers shall accept unselected waste in loose form, bagged, or in cartons, of any size with the limitation that the longest dimension shall not exceed 36 inches.

The pulper shall reduce the major portion of the waste to a slurry. Pulped particle dimensions shall meet provisions of the City of Los Angeles Bureau of Sanitation Fineness of Grind Specification for Garbage Grinders. The remainder of the waste not slurried shall be ejected by the junk separator.

The pulper shall expel essentially nonpulpables (Class II waste, some Class IA waste and Class IV wastes) through the separators. Such rejects shall initially contain a maximum of 10% by weight (dry basis) of pulpables, which shall be flushed out prior to these rejects being discharged to the conveyor system. Nonpulpables shall be removed and conveyed by the bucket elevator while the pulper is in operation.

Unprocessed waste remaining in the pulper at the end of any given day's operation shall be processed within 30 minutes. After pumpdown and cleaning, residue of non-pulpable materials remaining in the pulper shall not impair the efficiency of the system when it is restarted. It shall not be necessary to remove waste manually from the pulper for trouble-free restart.

The water level in the pulper tank shall be automatically controlled. There shall also be a provision to meter a disinfectant solution automatically into the system through the water makeup line.

Each pulper shall have a rated capacity of processing 12,000 pounds of hospital waste in a five hour period when fed at a continuous uniform rate a mixture of 90% Class I waste and 10% Class II waste. Controls provided shall include automatic start-stop and manual start-stop.

TABLE VI-1 SOLID WASTE CLASSIFICATION

	PULPABLE	NONPULPABLE
NORMALLY PROCESSABLE BY PULPER SYSTEM	CLASS I WASTE* Mixtures, consisting of: Paper products Plastic and rubber tubing Disposable plastic and rubber items Disposable aluminum cookware, dinnerware and foil Cloth or nonwoven fabrics, i.e. clothing, bed linen, towels, gowns, surgical garments, garbage and bones (cooked and uncooked), mop heads, rope, string and tape Wooden vegetable, fruit, poultry and meat crates Plastic casts Animal wastes and bedding CLASS IA WASTE* Glass, sand, ceramic, grit	CLASS II WASTE* Mixtures, consisting of: Metal cans and caps Silverware and utensils Surgical instruments Nails, screws, bolts, clips and other fasteners
NON-PROCESSABLE BY PULPER SYSTEM	CLASS III WASTE Autopsy waste** Pathogenic waste** Isolation area waste** Grease, oils and wax	CLASS IV WASTE Metal surgical appliances Pipe and pipe fittings Metal hardware and other similar objects Bedpans, urinals, pails, and other stainless steel wares Coat hangers, metal wire, and strapping Building material waste including: bricks, concrete, blocks, plaster, lumber, reinforcing rods, roofing material, and other similar objects

*Maximum size of object:
Largest dimension not to exceed tank diameter, less 14 inches

**Subject to local regulations

OPERATING CHARACTERISTICS - Mechanical Conveyors

Characteristics of the mechanical conveyor components required in this plant are described in the following (item numbers refer to keyed numbers on Figure VI-3):

Load-in Conveyor, 1 required (item 2B in bottom of storage bin), apron type, 40'L x 8'W, 50 TPH capacity, speed variable 2 to 10 FPM with jog capability, 2 HP motor, intermittent duty, with speed changes and jogging, maximum load 200 lbs. per sq. ft.

Load-out Conveyor, 1 required (item 2C in bottom of storage bin), type apron, 24'L x 8'W, 50 TPH capacity, speed variable 2 to 10 FPM with jog and reverse capability, 2 HP motor, maximum load 200 lbs. per sq. ft., duty requires frequent stops and starts, speed changes, jogging and reversing.

Vibrating Conveyor, 1 required (item 3), 12'L x 4'W x 18"H, 10 TPH capacity, 1" stroke @ 200 FPM, intermittent duty with frequent starts and stops.

Tripper Belt Conveyor, 1 required (item 4), 30" belt troughed at 35° for 6" each side, 70' o.a.l., 45' horiz. and 25' @ 20° incl., max. load 16 #PSF, avg. load 4 #PSF, speed 100 FPM, 5 HP motor, 10 TPH capacity, intermittent duty with frequent starts and stops.

Tripper, 1 required (item 4a), movable, powered with cable and reel, size and cap. to match 4 above, remote control of location and discharge, bypass back onto belt, intermittent duty with frequent position changes.

Pulper Feed Conveyor, 2 required (item 5), 24" belt troughed @ 35° for 6" each side, 20' c. to c., 20° max. incline, speed variable 10 to 20 FPM, 2 TPH capacity, continuous duty.

Bypass Conveyor, 1 required (item 6), 36" belt troughed @ 35° for 6" each side, 57' c. to c., 20° incline, 135 FPM, 16 TPH capacity, continuous duty.

Grit and Junk Conveyor, 1 required (item 11), type either belt or screw, size 12" belt or 9" screw, 28' c. to c., horiz., speed 150 FPM or 15 RPM, 2 TPH capacity, continuous duty.

Bucket Elevator, 1 required (item 12), lift 24', incline 70°, 2 TPH capacity, continuous duty.

OPERATING CHARACTERISTICS - Wet Air Oxidation System

The wet air oxidation system shall include equipment, piping, valves, motor control center, instrumentation and insulation. Principal components of the system shall include two air compressors (400 psig), equipped with 100 HP motors, one hydraulic pressure pump (25 GPM) equipped with a 15 HP motor, one high pressure hydraulically operated sludge pump, one sludge feed pump equipped with a 5 HP motor, one solvent pump (20 GPM) equipped with a 10 HP motor, one solvent tank constructed of 304 stainless steel or fiber glass, one gas fired boiler (400 psig), one heat exchanger with concentric piping of 304 stainless steel tested at 1200 psig, one reactor for operation at 400 psig and 400°F. tested at 1200 psig, one separator designed for operation at 400 psig and 400°F. tested at 1200 psig, one gas fired catalytic vapor oxidation unit, one pulped sludge storage tank (24,000 gallon capacity), and one oxidized sludge thickening tank (24,000 gallon capacity).

The system shall be so designed as to produce a sterile and dewaterable oxidized end product. Flameless combustion of the pulped sludge shall take place in an aqueous state. The oxidized solids shall be dewaterable, without the addition of chemical coagulants, to a moist solid which is non-putrescible, biologically stable and free of obnoxious odors.

Based on the calculated 13,000 pounds of pulpable wastes (dry weight) generated daily at the LAC-USC Medical Center, this low pressure oxidation system shall have the capability of handling slurries at a digestion rate of 1000 pounds per hour (dry solid weight) or 24,000 pounds daily under continuous operation. The capabilities of the system shall permit a maximum of 50% reduction of insoluble organic matter and 90% solubilization and oxidation of polyethylene plastics.

OPERATING CHARACTERISTICS - Experimental Sewage Treatment Plant

The purpose of this plant will be to determine the effect on conventional sewage treatment plants from the addition of various quantities of pulped refuse to the sewage, to determine what modifications may be required in sewage treatment plant design and operation to treat mixtures of pulped refuse and sewage satisfactorily, and to evaluate the effectiveness of processing pulped refuse at a sewage treatment plant.

The plant will treat a proportioned mix of domestic sewage taken from a sewer in the vicinity and controlled quantities of pulped refuse taken from the storage tanks at the waste processing plant. The plant will provide a maximum of flexibility within and between its various elements to facilitate the testing of the various processes and will have a capacity of 30 gpm or 43,000 g.p.d. The design will be based on the use of steel tanks which can be removed at the end of the program.

Design Criteria:

1. Average Flow	43,000 g.p.d.
2. Population Equivalent	430 persons
3. Assume solid loading at 1.2#/cap./day or 500#/day Equivalent to 1000 g.p.d. of 6% pulp	
4. Mixing Chamber	Detention time 15 minutes = 465 gal. Say 4'Dia. and 5' S.W.D. with variable speed mixer
5. Primary Clarifier	Detention 2 1/2 hrs. = 4500 gal. Say 12' Dia. and 6' S.W.D. with sludge scrapper, central feed and peripheral discharge No skimmer required
6. Aeration	Detention time 24 hrs. 43,000 gal. Say 2-20' Dia. and 9' S.W.D. with variable speed bridge mounted mechanical aerators

7.	Secondary Clarifier	Detention time 2 hrs. with 25% return 4500 gal. Say 12' Dia. and 6' S.W.D. with sludge scrapper, center feed and peripheral discharge
8.	Sludge Processing	Aerobic Digestor for 1/2 capacity at 15 cu.ft./cap = 6450 cu.ft. Say 20' Dia. and 20' S.W.D. with floating aerator
		Anaerobic Digestor for 1/2 capacity at 15 cu.ft./cap = 6450 cu.ft. Say 20' Dia. and 20' S.W.D. with floating cover
		Wet air Oxidation provide sludge thickening tank Say 6' Diameter and 7' S.W.D. 1000 gal. of thickened sludge to be processed at 25 gpm = 40 min. operation daily
		Dewatering Use Vacuum Filter at pulping installation

ESTIMATED ANNUAL OPERATING COSTS

Annual direct operating costs of the total project, excluding capital costs, are estimated at $202,000. The breakdown of these costs to the basic elements of the project, i.e. the waste system, experimental sewage treatment plant and laboratory testing, are estimated as shown in Table VI-2.

TABLE VI-2 ANNUAL OPERATING COSTS OF PROJECT FACILITIES

	Solid Waste System	Sewage Tr. Plant	Laboratory	Total
*Payroll	$ 61,000	$32,000	$27,000	$120,000
Materials, Equip. & Supplies	5,000	3,000	12,000	20,000
Maintenance	4,000	4,000	2,000	10,000
Power & Fuels	50,000	2,000	-	52,000
TOTAL	$120,000	$41,000	$41,000	$202,000

*Includes taxes, insurance and social benefits

The analysis of economic benefits of the project must consider only those costs associated with the operation of the waste system and not those involved with research activities. Implementation of the proposed waste system, although largely limited in effect to those costs and functions in the existing inter-unit, inter-building and off-site systems, also will have some effect on preparation and handling of certain disposable wastes in the unit system (patient care and service areas). Based on these system modifications, Table VI-3 was prepared showing the changes in daily payroll costs that may be expected. Comparisons of labor costs by categories of wastes, as well as costs of operation by system components or sub-systems, can be made with Table II-13 (Volume II, Chapter II), the estimated daily labor costs of the existing

TABLE VI-3 ESTIMATED DAILY LABOR COSTS OF THE MODIFIED WASTE SYSTEM - LAC-USC MEDICAL CENTER

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	10.0	$ 57.20	$ 57.20						Equip. Op.II Equip.Op.II	$4.94 5.28	0.3 0.1	$ 1.48 0.53	$ 2.01						$ 59.21
Pathological and Surgical	Lab.Tech. Custodian	4.12 3.71	1.0 0.5	4.12 1.86	5.98	Custodian	$3.71	0.5	$ 1.86	$ 1.86	Lab.Tech	4.12	3.0	12.36	12.36						20.20
Soiled Linen	Nurse Attendant	5.72 3.34	94.0 94.0	537.68 313.96	851.64						Equip. Op.II	4.94	16.8	82.99	82.99						934.63
Rubbish	Custodian	3.71	525.0	1947.75	1947.75						Equip. Op.II Equip.Op.II	4.94 5.28	6.0 6.6	29.64 34.85	64.49						2012.24
Reusable Patient Items	Nurse Attendant	5.72 3.34	15.0 66.0	91.52 220.44	311.96																311.96
Non-Combustible	Custodian	3.71	10.0	37.10	37.10						Equip. Op.II Equip.Op.II	4.94 5.28	0.3 0.6	1.48 3.17	4.65	Truck Dr.	$4.74	1.0	$4.74	$4.74	46.49
Garbage (Non-Grindable)	Attendant	3.34	3.0	10.02	10.02						Equip. Op.II Equip.Op.II	4.94 5.28	0.6 0.7	2.96 3.70	6.66						16.68
Food Service Items	Nurse Attendant	5.72 3.34	142.0 142.0	812.24 474.28	1286.52	Elev.Op.	3.71	7.25	26.90	26.90	Tram Dr. Fd.Srv.Wk Inst.Lab.	4.03 3.42 4.03	3.5 18.0 3.5	14.11 61.56 14.11	89.78						1403.20
Radiological	Lab.Tech. Custodian	4.12 3.71	0.5 0.2	2.06 0.74	2.80	Elev.Op. Custodian	3.71 3.71	0.3 0.3	1.11 1.11	2.22	Custodian	3.71	1.0	3.71							8.73
Ash & Residue	Inst. Lab.	4.03	0.1	0.40	0.40						Equip. Op.II	4.94	0.1	0.49	0.49						0.89
Animal Carcasses	Lab.Tech.	4.12	0.75	3.09	3.09						Lab.Tech.	4.12	0.5	2.06	2.06						5.15
Food Waste (Grindable)	Fd.Srv.Wk	3.42	27.0	92.34	92.34																92.34
					$4606.80					$30.98					269.20					$4.74	$4911.72

solid waste system.

It is anticipated that the effect of the proposed system will reduce total daily labor costs from the present level of $6,232.46 to $4,911.72, or a daily savings of $1,320.74. The largest increment of this savings, an amount of $981.60, is estimated to accrue from the combined functions of inter-unit, inter-building and off-site systems. Additional labor savings of $304.92 are estimated to occur in the unit system as a result of changes of methods, practices and the elimination of separate collection systems, such as sharps and needles, made possible by the system modifications.

Increases in certain operational costs, such as materials, supplies, maintenance, power and fuels are attributed to the new system. Collectively, these added costs are estimated at $60,000 annually, or $164.38 per day. With these offsetting costs considered, savings in direct operating costs are reduced to $1,156.36, or a net reduction in operating costs of about 18.6% in the total system is anticipated.

ESTIMATED CONSTRUCTION COSTS

Development of the total project previously described, including the pneumatic conveyor system, waste processing plant and the experimental sewage treatment plant, and based upon preliminary plans, is estimated to cost $3,180,410, as shown in Table VI-4, including contingencies and engineering, but excluding land.

Excluding the costs of the experimental sewage treatment plant and related contingencies and fees, the net cost of the permanent solid waste system installation as proposed for the Medical Center is about $3,000,000.

TABLE VI-4 ESTIMATED CONSTRUCTION COSTS

	$	$
A. Pneumatic Conveyor System		
1. Pipe System, including inlets and controls	1,275,457	
2. Evacuators, Filters, Hoppers, etc.	176,000	
3. Electric Power and Controls	142,000	1,593,457
B. Sewage Pump Station		
1. Structure	25,000	
2. Pumps and Controls	21,000	
3. Piping	3,000	
4. Electrical	2,000	51,000
C. Outside Piping		
1. Diversion Chamber	2,000	
2. 800 lf.-12" V.C. Sewer @ $12	9,600	
3. 800 lf.-8" C.I. Force Main @ $8	6,400	18,000
D. Processing Plant		
1. Building 175,000 cf. @ $1	175,000	
2. Tank Screening 6,000 sf. @ $6	36,000	211,000
E. Fabricated Plate		
1. Inlet Hopper	2,400	
2. Storage Bin	6,250	
3. Bypass Hopper	750	
4. Pulper Storage	4,270	
5. Loading Hopper	4,700	
6. Storage Tanks	17,400	
7. Conveyor Supports	2,000	37,770
F. Materials Handling Systems		
1. Load in Conveyor 40'L x 8'W 50 T.P.H.	11,000	
2. Load out Conveyor 24'L x 8'W 50 T.P.H.	8,000	
3. Leveling Conveyor Vibratory 12'L x 4'W 10 T.P.H.	4,500	
4. Tripper Belt Conveyor 70'L x 30" W 10 T.P.H.	9,000	
5. Tripper	5,500	
6. 2 Pulper Feed Conveyors 20'L x 24"W 2 T.P.H.	6,000	

F. Materials Handling Systems (continued)		
7. Bypass Conveyor troughed belt 57'L x 36"W	$ 1,500	$
8. Grit & Junk Conveyor screw type 9" x 28'	4,000	
9. Grit & Junk Elevator bucket type	3,000	
10. Installation (40% x $52,500)	21,000	73,500
G. Pulping Equipment		
1. 2-60" diam. Pulpers	102,500	
2. 2-500 gpm Feed Pumps		
3. 2-6" Degritters		
4. 2-9" Screw type Thickeners		
5. Installation (40% x $102,500)	41,000	143,500
H. Wet Oxidation Plant		
1. 1 H.P. Air Compressor		
2. 1 H.P. Feed Pump		
3. 1 Bailer Assembly 800 psi		
4. 1 Heat Exchanger 800 psi		
5. 1 Reactor 800 psi		
6. 1 Separator 800 psi		
7. 1 Catalytic Oxidation Unit		
8. 1 Solvent Tank & Pump		
9. 1 Vacuum Filter		
10. 1 Vacuum Pump		
11. 1 Conveyor		
12. Installation		375,000
I. Electrical		71,500
J. Hopper Weighing Scale		7,500
Total Estimated Cost of Solid Waste System		$2,582,227
K. Experimental Sewage Treatment Plant		125,000
Total Estimated Construction Costs		$2,707,227
L. Contingencies 10%		270,723
Total Construction Budget		$2,977,950
M. Engineering Fee		202,460
Total Estimated Cost		$3,180,410

Note: Component Costs Are More Refined Than Those Shown in Table III-2

BENEFITS OF THE SYSTEM

It is estimated that the net investment required will produce an annual advantage or savings of $498,350 before depreciation, or return the initial investment in about six years. Assuming a straight line depreciation on the installation, with a 10-year life allowed on the pulping station equipment (value about $400,000) and a 25-year life allowed on the structures, pneumatic system, wet oxidation plant, etc. (value about $2,600,000), annual depreciation costs can be calculated at about $144,000. A net annual surplus of $354,350 available for other improvements or patient care functions, and representing a return of 12.1% on the invested capital, is anticipated after depreciation.

Table VI-5 summarizes the tangible economic benefits to be derived from the implementation of the project, incorporating those direct operating benefits as noted, together with certain indirect benefits that accrue due to elimination of certain parts of the existing system.

Certain intangible benefits with monetary value will also accrue as a result of operating the improved solid waste system. Improvement in sanitation, safety, security and esthetics may likely have an effect on the frequency of personal injury, accidents, illness of personnel, as well as patients throughout the plant and perhaps the greatest effect on those being associated with the direct handling of the waste materials. Similarly, limiting the exposure of wastes in transport and off-site disposal would likely have a beneficial effect to the community at large. Improvement in systems operation and these related environmental conditions should also tend to reduce the general cost of building maintenance and losses due to fire or other casualty. This improved system using an isolated and specialized transport method will reduce congestion in building corridors, allowing more efficient performance of other service functions. Economic analysis of annual dollar savings that may accrue from these benefits would require a multitude of record statistics of plant operation that are not available and adequate bases of fact are not at hand to permit an intelligent detailed estimate. However, it is conceivable that collectively the intangible benefits could equal, if not exceed, the estimated value of tangible benefits.

The improvement in environmental conditions which result from the modified system are more readily identifiable than the economics of intangible benefits. Table VI-6 shows the numerical rating of the improved system by categories of wastes, sub-systems

TABLE VI-5 TANGIBLE ECONOMIC BENEFITS

Investment Requirement:	
Installed Cost of Project	$3,000,000
Less Salvage Allowance of Existing Waste System Equipment (1)	- 28,000
Less Avoided Cost of Capital Improvements to Existing System (2)	- 50,000
NET INVESTMENT REQUIRED	$2,922,000
Direct Operating Benefits (3):	
Operating Labor (4)	$ 541,650
Less Increase in other Operating Costs:	
Maintenance	- 4,000
Materials and Supplies	- 5,000
Power and Fuels	- 50,000
NET ANNUAL OPERATING ADVANTAGE	$ 482,250
Indirect Benefits (Recurring Annual Savings):	
Annual Decline in Equipment Salvage Value of Existing System (5)	$ 2,800
Annual Depreciation on Capital Improvements Avoided (6)	5,000
Annual Value of Building Areas Released for Other Use (7)	8,300
TOTAL ANNUAL ADVANTAGE OR SAVINGS	$ 498,350
Less Annual Depreciation Expense	$ 144,000
NET ANNUAL RETURN ON INVESTMENT	$ 354,350
% Return on Investment	12.1%

(1) Approximately 1/3 the estimated cost of present inter-building and off-site equipment
(2) Allowance for alternate minimum annual improvements to solid waste system
(3) Savings in annual operating costs
(4) Net annual savings over present labor costs
(5) 10% of present allowed value or (1) above
(6) Allow 10-year life on annual improvements (2) above
(7) Allowance of 1/2 of in-building storage areas or 4,150 SF @ $2.00/SF/Yr.

Reproduced from best available copy.

TABLE VI-6 NUMERICAL RATING OF PROPOSED SOLID WASTE SYSTEM - LAC-USC MEDICAL CENTER

Type of Waste		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	40	0	50		20	0	110	12	50		20	12	70	0	50	3	10	5	20	8	80	0	30	0	[illegible]	0	[illegible]	20	[illegible]
	Safety	10	40	0	50		10	10	100	0	45		10	0	55	0	45	1	5	2	10	3	60	0	[illegible]	0	[illegible]	0	[illegible]	12	[illegible]
	Security	0	30	0	5		25	0	60	0	5		25	0	30	0	5	0	25	0	10	0	40	0	[illegible]	0	[illegible]	0	70	0	[illegible]
	Esthetics	0	5	0	5		5	0	15	0	5		5	0	10	0	5	2	5	1	5	3	15	0	5	0	[illegible]	0	[illegible]	3	[illegible]
Surgical, Pathological & Animals	Sanitation	10	20	15	35	25	35	50	90	15	20	35	35	50	55	5	10	10	10	40	40	55	[illegible]		[illegible]		[illegible]		[illegible]	155	[illegible]
	Safety	2	5	5	10	2	5	9	20	2	5	7	10	9	15	12	15	10	10	5	5	27	30		[illegible]		[illegible]		[illegible]	45	[illegible]
	Security	0	5	0	5	35	35	35	45	0	5	25	35	25	40	2	5	20	20	5	5	27	30		[illegible]		[illegible]		[illegible]	87	[illegible]
	Esthetics	5	10	2	5	11	15	18	30	2	5	11	15	13	20	2	5	15	15	10	10	27	30		5		15		[illegible]	58	[illegible]
Soiled Linen	Sanitation	30	40	35	50		30	65	120	20	80		50	20	130	0	30	7	25	20	40	27	[illegible]		[illegible]		[illegible]		[illegible]	112	[illegible]
	Safety	2	5	2	5		5	4	15	0	5		5	0	10	0	10	1	5	7	15	8	30		5		[illegible]		[illegible]	12	[illegible]
	Security	2	5	2	5		5	4	15	0	5		15	0	20	0	15	0	10	2	5	2	[illegible]		[illegible]		[illegible]		[illegible]	6	[illegible]
	Esthetics	15	20	10	15		10	25	45	0	10		10	0	20	0	5	2	5	2	5	4	15		[illegible]		[illegible]		[illegible]	29	[illegible]
Rubbish	Sanitation	2	5	5	10		10	7	25	5	20		15	5	35	0	10	2	10	4	15	6	[illegible]	0	10	0	[illegible]	0	[illegible]	18	[illegible]
	Safety	7	15	10	20		25	17	60	0	20		45	0	65	0	15	6	25	6	25	12	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	29	[illegible]
	Security	2	5	2	5		20	4	30	0	5		15	0	20	0	5	0	15	0	10	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	4	[illegible]
	Esthetics	15	15	7	15		10	22	40	0	10		10	0	20	0	5	1	5	1	5	2	[illegible]	0	10	0	[illegible]	0	[illegible]	24	[illegible]
Reusable Patient Items	Sanitation		15	10	20	5	25	15	60		15		15		30		20		10		15		[illegible]		10		[illegible]		[illegible]	15	[illegible]
	Safety		15	10	20	0	5	10	40		15		5		20		15		5		15		[illegible]		10		15		[illegible]	10	[illegible]
	Security		15	0	5	7	15	7	35		5		15		20		10		15		15		[illegible]		10		[illegible]		[illegible]	7	[illegible]
	Esthetics		5	2	5	2	5	4	15		5		5		10		5		5		5		[illegible]		5		[illegible]		[illegible]	4	[illegible]
Non-Combustible	Sanitation	2	5	5	10		10	7	25	4	15		5	4	20	0	5	1	5	1	5	2	[illegible]	2	[illegible]	30	[illegible]	32	[illegible]	45	[illegible]
	Safety	10	20	5	15		20	15	55	0	15		20	0	35	0	10	2	10	2	10	4	30	0	5	13	[illegible]	13	[illegible]	32	[illegible]
	Security	5	10	0	5		15	5	30	0	5		10	0	15	0	5	0	10	0	5	0	20	0	5	15	15	15	[illegible]	20	[illegible]
	Esthetics	5	10	2	5		5	7	20	0	5		5	0	10	0	5	1	5	1	5	2	15	2	[illegible]	2	[illegible]	4	[illegible]	13	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	2	5		15	4	25	1	5		15	1	20	0	5	1	5	4	15	5	[illegible]	0	10	0	15	0	[illegible]	10	[illegible]
	Safety	2	5	2	5		5	4	15	0	5		5	0	10	0	5	1	5	1	5	2	15	0	5	0	10	0	15	6	[illegible]
	Security	0	5	0	5		5	0	15	0	5		5	0	10	0	5	0	5	0	5	0	15	0	5	0	5	0	10	0	[illegible]
	Esthetics	4	15	1	5		10	5	30	0	5		10	0	15	0	5	2	10	1	5	3	20	0	10	0	[illegible]	0	[illegible]	8	[illegible]
Food Service Items	Sanitation	2	5	2	5	7	10	11	20	2	5	7	10	9	15	2	5	2	5	3	15	7	[illegible]		[illegible]		15		[illegible]	27	[illegible]
	Safety	5	10	5	10	7	10	17	30	2	5	7	10	9	15	2	5	2	5	0	10	4	[illegible]		5		10		15	30	[illegible]
	Security	0	5	1	5	5	5	6	15	2	5	5	5	7	10	2	5	5	5	2	5	9	15		5		[illegible]		[illegible]	22	[illegible]
	Esthetics	2	5	2	5	3	5	7	15	2	5	2	5	4	10	2	5	5	5	2	5	9	15		5		[illegible]		[illegible]	20	[illegible]
Total	Sanitation	48	135	74	185	37	155	159	475	59	210	42	165	101	375	7	135	26	85	77	165	110	[illegible]	2	60	30	[illegible]	32	[illegible]	402	[illegible]
	Safety	38	115	39	135	9	85	86	335	4	115	14	110	18	225	14	120	23	70	23	95	60	[illegible]	0	[illegible]	13	[illegible]	13	[illegible]	177	[illegible]
	Security	9	80	5	40	47	125	61	245	2	40	30	125	32	165	4	45	25	110	9	60	38	[illegible]	0	[illegible]	15	[illegible]	15	[illegible]	146	[illegible]
	Esthetics	46	85	26	60	16	60	88	210	4	50	13	65	17	115	4	40	28	50	18	45	50	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	[illegible]	[illegible]
TOTAL		141	415	144	420	109	425	394	1265	69	415	99	465	168	880	29	340	102	325	127	365	258	[illegible]	4	275	60	840	64	1115	894	[illegible]

and sub-system functions within the total system. Comparison of this rating with Table II-18 (page II-53, Volume II), the numerical rating of the existing solid waste system operation, shows the detail of the decrease in deficiencies accomplished by the improved system. The total effect of these improvements can be summarized as shown in Table VI-7, showing percentage deficiencies by sub-system functions in the existing system and the improved system. Graphically, these effects are also illustrated in Figure VI-6.

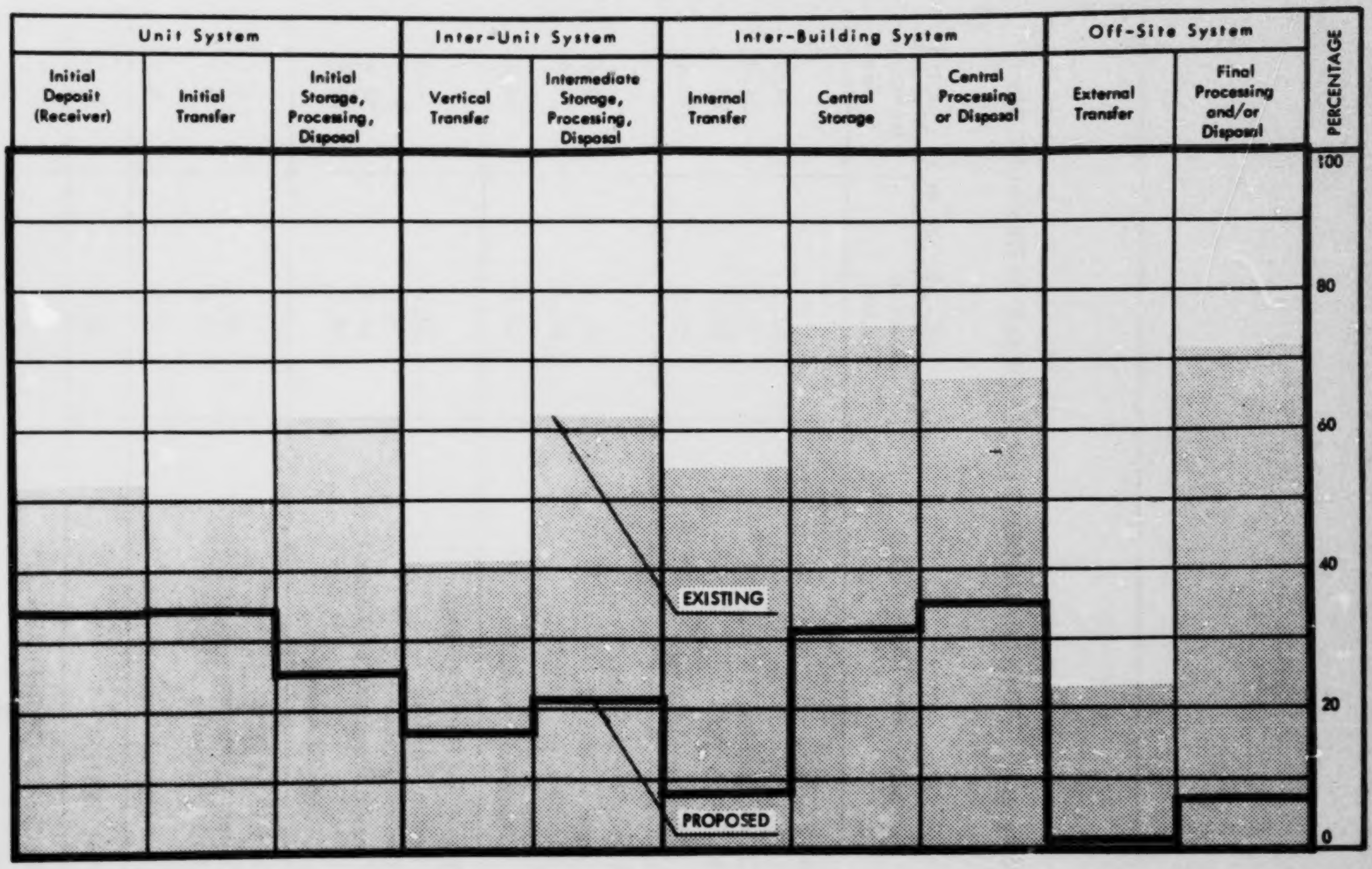
It is estimated that a decrease of 64.7% in present deficiencies of system operation can be accomplished with the proposed improvements. The remaining deficiencies are largely associated with those reusables (patient and food service items) not entering the modified system, as well as the initial handling of nearly all items in the unit system prior to entering the modified portions of the system. In the case of the latter, further reduction of deficiencies in operation are likely to come about only through enforcement of policies and closer supervision and not through mechanization in the foreseeable future.

In summary, marked improvement in environmental conditions (both in-plant and off-site) can be accomplished through implementation of the proposed modifications. Those tangible economic benefits as identified indicate these improvements can be made comfortably within the present level of costs; in fact, will likely provide a substantial operating surplus. Intangible benefits, though not of identifiable value, will in all likelihood provide substantial economic bonus in the plant operation.

TABLE VI-7 PERCENTAGE DEFICIENCIES OF SUB-SYSTEM FUNCTIONS

Sub-System and Function	LAC-USC MEDICAL CENTER	
	Existing System	Improved System
UNIT SYSTEM:		
Initial Deposit	52.3	34.0
Initial Transfer	50.5	34.3
Initial Storage	62.1	25.3
Weighted Average	55.0	31.1
INTER-UNIT SYSTEM:		
Vertical Transfer	41.2	16.6
Intermediate Storage	62.2	21.3
Weighted Average	52.0	19.1
INTER-BUILDING SYSTEM:		
Internal Transfer	54.9	8.3
Central Storage	74.8	31.4
Central Processing or Disposal	67.4	34.8
Weighted Average	68.0	24.8
OFF-SITE SYSTEM:		
External Transfer	23.3	1.5
Final Processing or Disposal	71.8	7.1
Weighted Average	60.0	5.7
TOTAL SYSTEM	58.0	20.6
% DECREASE OF DEFICIENCIES	-	64.7

FIGURE VI-6 COMPARISON OF PERCENTAGE DEFICIENCIES OF SUB-SYSTEM FUNCTIONS - LAC-USC MEDICAL CENTER



RECOMMENDATIONS FOR IMPLEMENTATION

Based upon the foregoing study and evaluation of the existing system operation, considered alternative methods of improvement, the concept of the proposed modifications and development of this concept through preliminary planning stages, cost estimates and the analysis of tangible benefits, this project is recommended as a solution to the more critical problems of the current solid waste system at LAC-USC Medical Center. It is a solution with qualifying economic and environmental benefits. Through the waste processing and disposal methods employed, minimal emissions are contributed to the already critical air pollution conditions of the Los Angeles Basin. A homogeneous residue is also produced by processing for disposal at landfills or discharge to sewers.

In summation, the proposed project meets local needs while also providing a laboratory for study and experimentation on the pneumatic handling system in combination with a number of optional disposal methods and processes that may have potential application in various size hospital plants throughout the country.

APPENDICES

Page No.

A SUMMARY OF CODES AND REGULATIONS a-1

B LAC-USC MEDICAL CENTER
  Numerical Rating of Modified Systems b-1
  Estimated Daily Labor Costs b-3

C LONG BEACH GENERAL HOSPITAL
  Numerical Rating of Modified Systems c-1
  Estimated Daily Labor Costs c-3

D HARBOR GENERAL HOSPITAL
  Numerical Rating of Modified Systems d-1
  Estimated Daily Labor Costs d-3

E RANCHO LOS AMIGOS HOSPITAL
  Numerical Rating of Modified Systems e-1
  Estimated Daily Labor Costs e-3

F JOHN WESLEY HOSPITAL
  Numerical Rating of Modified [illegible]ms f-1
  Estimated Daily Labor Costs f-3

G OLIVE VIEW HOSPITAL
  Numerical Rating of Modified Systems g-1
  Estimated Daily Labor Costs g-3

H MIRA LOMA HOSPITAL
  Numerical Rating of Modified Systems h-1
  Estimated Daily Labor Costs h-3

The following summary includes selected State, County and City regulations pertaining to solid waste handling and disposal in multistory buildings and hospitals. Applicable sections of the various codes and policies are referenced numerically by the respective section numbers and in some cases, text has been edited to present only pertinent information. Data has been incorporated from the following indexed documents:

LOS ANGELES CITY MUNICIPAL CODE a-2
UNIFORM BUILDING CODE - County Ordinance 2225 a-3
PLUMBING CODE - County Ordinance 2269 a-4
FIRE CODE - County Ordinance 2947 a-8
BUSINESS LICENSING - County Ordinance 5860 a-10
SANITARY SEWER AND INDUSTRIAL WASTE - County Ordinance 6130 a-12
PUBLIC HEALTH CODE - County Ordinance 7583 a-17
MECHANICAL CODE - County Ordinance 9544 a-18
COUNTY AIR POLLUTION CONTROL DISTRICT
  Administration of the Permit System a-19
POLICY OF COUNTY SANITATION DISTRICT a-20
CALIFORNIA ADMINISTRATIVE CODE - Title 17 a-21
CALIFORNIA ADMINISTRATIVE CODE - Title 19 a-23
CALIFORNIA HEALTH AND SAFETY CODE a-24
CALIFORNIA PRIVATE INSTITUTION LICENSING ACT a-27
STATEMENT ON CODE SUMMARIES a-28

LOS ANGELES CITY MUNICIPAL CODE

Sect. No.	
3317a	Sewer Clogging. No person shall deposit such matter as to interfere with the effective operation of any sewer or storm drain.
3317b	Garbage Grinders. Waste from garbage grinders to a fineness and by a method approved by the Board of Public Works may be discharged into a sewer by any method approved by that Board.
64.30	Industrial Waste Disposal. Determines the quality of the liquid waste to be discharged and specifies that the producer shall provide a manhole for the purpose of sampling the discharge.
64.31	Industrial Waste Disposal in Watercourses. A permit is required for discharges into any drains, channels, watercourses or waters under the jurisdiction of the City of Los Angeles.
66.00	Garbage Refuse Collection - Definitions 1: Refuse shall mean any combination of rubbish and garbage. 1b: Commercial refuse shall mean either rubbish or any combination of rubbish and garbage generated at such place other than a private residence. 2: Garbage shall mean either animal or vegetable residue or any combination thereof resulting from any use of a food, beverage or mixture of food and beverage except food plant waste or market waste. 2b: Commercial garbage shall mean garbage resulting from the preparation or processing of a food, beverage or mixture thereof for the consumption on the premises of any place other than a private residence.
66.06	Permits the discharge of ground garbage into the sewer subject to regulations established by the Board of Public Works.

UNIFORM BUILDING CODE - County Ordinance 2225

Sect. No.	
1408	Enclosure of Vertical Openings. Dumbwaiter shafts, clothes chutes and other vertical openings shall be enclosed and the enclosure shall be as set forth in Table 17-A.
3003	Enclosure of Vertical Openings. Rubbish and linen chutes shall terminate in rooms separated from the remainder of the building by a One-Hour Fire-Resistive Occupancy Separation. Openings into the chutes shall not be located in required exit corridors or stairways.
3701-3705	Chimneys, flues and fireplaces and their connections, carrying products of combustion, shall conform to the requirements of these sections. The information contained in these sections includes design and structural considerations and clearance to combustible materials.

Sect. No.

Chapter 1: Definitions

Industrial Waste. Is any and all liquid or waterborne waste from industrial or commercial processes except domestic sewage.

Insanitary. A condition which is contrary to sanitary principles or is injurious to health. This includes any plumbing fixture or other waste discharging receptacle or device, which is not supplied with water sufficient to flush it and maintain it in a clean condition. Also any defective fixture, trap or pipe.

Interceptor. A device designed and installed so as to separate and retain deleterious, hazardous or undesirable matter from normal wastes and permit normal sewage or liquid wastes to discharge into the disposal terminal by gravity.

Nuisance. Includes an inadequate or unsafe water supply or sewage disposal system.

Sewage. Any liquid waste containing animal or vegetable matter in suspension or solution and may include liquids containing chemicals in solution.

303 Sewer Required. Every building in which plumbing fixtures are installed shall have a connection to a public or private sewer; except when a public sewer is not available for use, drainage piping from buildings and premises shall be connected to an approved private sewage disposal system.

305 Industrial Wastes.

a - Wastes detrimental to the public sewer system or to the sewage treatment plant shall be treated and disposed of as found necessary by the authority having jurisdiction.

Sect. No.	
305	Industrial Wastes (continued) b. Sewage or other waste from a plumbing station which may be deleterious to surface or subsurface waters shall not be discharged into the ground or into any waterway unless it has first been rendered innocuous through subjection to some acceptable form of treatment.
313	Independent Systems. The drainage system for each new building and of new work installed in any existing building shall be separate and independent from that of any other building and when available, every building shall have an independent connection with a public or private sewer.
606	Food Waste Disposers. No commercial or domestic food waste disposer shall be connected to any drainage system until a production prototype thereof has first been tested and approved.
612	Chemical Wastes. Chemical or industrial liquid wastes which are likely to damage or increase maintenance costs on the sanitary sewer system, detrimentally affect sewage treatment or contaminate surface or subsurface waters shall be pretreated to render them innocuous prior to discharge into a drainage system.
708	Industrial Interceptors and Separators. Interceptors shall be provided when the authority deems them necessary for the proper handling of liquid wastes containing grease, solids, acid, alkaline substances or other ingredients harmful to the building drainage system, the public or private sewer or to public or private sewage disposal.
711	a - Grease Interceptors. When in the judgment of the authority, waste pretreatment is required, an approved type grease interceptor complying with the provisions of this section shall be installed in the waste line leading from the sinks, drains and other fixtures or equipment in the following establishments:

Sect. No.

711 a - Grease Interceptors (continued)

hospital, restaurant, hotel or other establishments where grease may be introduced into the drainage or sewerage system in quantities that can affect line stoppage or hinder sewage treatment or private sewage disposal.

c - No grease interceptor shall be installed which has an approved rate of flow of more than 55 gallons per minute except when specially approved.

d - No grease interceptor shall be installed which has an approved rate of flow of less than 20 gallons per minute. Each plumbing fixture or piece of equipment connected to a grease interceptor shall be provided with an approved type flow control or restricting device.

h - Interceptors shall be maintained in efficient operating condition by periodic removal of the accumulated grease. No such collected grease shall be introduced into any drainage piping, private or public sewer.

712 Unless specifically required or permitted, no food waste disposal unit shall be connected to or discharged into any interceptor.

906c Grease Interceptors. No food waste disposal units shall be connected through a grease interceptor.

1102 Damage to Public Sewer or Private Sewage Disposal System.

a - No person shall deposit, by any means, into any plumbing fixture, floor drain interceptor, sump, receptacle or device which is connected to any drainage system, public or private sewer, any ashes, cinders, solids, rags, oils, grease or any other thing which would or could cause damage to the public or private sewer or private sewage disposal system.

Sect. No.

1102 Damage to Public Sewer or Private Sewage Disposal System (continued)

d - No commercial food waste grinder shall be connected to a private sewage disposal system unless permission has been obtained.

1111 Private Sewage Disposal (General).

a - A building sewer may be connected to a private sewage disposal system complying with the provisions of this chapter. The type of system shall depend on the location, soil porosity and ground water level and shall be designed to receive all sanitary sewage from the property. The system, eccept as otherwise provided, shall consist of a septic tank with effluent discharging into a sub-surface disposal field, into one or more seepage pits or into a combination of sub-surface disposal field and seepage pits.

b - Where conditions are such that the above system cannot be expected to function satisfactorily; for installations where appreciable amounts of industrial or indigestible waste are produced; for hotels, hospitals, office buildings and schools; for occupancies producing abnormal quantities of sewage or liquid waste or when grease interceptors are required by other parts of this code, the method of sewage treatment and disposal shall be first approved by the Administrative Authority and the Health Officer.

FIRE CODE - County Ordinance 2947

Sect. No.

27.100a Class 1 Incinerator. Any incinerator which is within or part of a building and which conforms with the requirements of the building code; any free standing incinerator that has a fire box volume above the grate exceeding 27 cubic feet or which exceeds 6 feet in height exclusive of the chimney or any multiple chamber incinerator.

27.109 Hot Ashes and Other Dangerous Materials. No person shall deposit hot ashes, cinders, smoldering coals or greasy or oily substance liable to spontaneous ignition into any combustible receptacle or place within 10 feet of any combustible materials except in a non-combustible covered receptacle. Such receptacles shall be placed on a non-combustible surface and shall be kept at least two feet away from any combustible wall, partition or exterior window opening.

27.113 Accumulation of Waste Material.

a - Accumulation of waste paper, litter, combustible or flammable waste, petroleum products or rubbish of any kind shall not be permitted to remain upon any roof or in any open space or vacant lot.

b - All combustible rubbish, oily rags or waste material when kept within a building shall be securely stored in metal-lined receptacles with tight fitting covers in rooms or vaults constructed of non-combustible materials.

27.114 Handling Combustible Materials. No person responsible for rubbish, litter, or combustible waste materials shall fail at the close of each day to cause all such material which is not compactly baled and stacked in an orderly manner to be removed from the building or stored in suitable vaults or in metal or metal lined covered receptacles or bins. The chief shall require suitable baling presses to be installed

Sect. No.

27.114 Handling Combustible Materials (continued)
where accumulations of paper and waste materials are not removed every second day.

27.115 Storage of Combustible Materials.

b - Storage in buildings shall be orderly, no more than two feet from the ceiling and shall be so located as not to endanger the exit from the building.

c - Outdoor combustible storage shall not exceed 20 feet in height, not be located within five feet of any building or property line and not be located within ten feet of an unprotected opening in any building. Such storage shall not exceed five feet in height when within ten feet of any building or property line.

d - The storage or accumulation of combustible waste matter within any building so as to constitute a fire hazard is prohibited. Such materials shall be removed daily or at intervals specified by the chief.

BUSINESS LICENSING - County Ordinance 5860

Sect. No.	
25.5	Combustible Rubbish. Refers to all discarded combustible material including, but not limited to, papers, rags, household bedding, packing materials, cartons and boxes.
26	County. Shall refer to the County of Los Angeles.
26.1	County Engineer. Shall refer to the County Engineer of the County of Los Angeles, or his authorized deputy, agent or representative.
26.2	Garbage. Refers to all discarded food, animal offal, fruit and vegetable waste resulting from the preparation of food, or any manufactured product thereof. May be from, but not limited to, kitchens, hotels, restaurants or other places or institutions, both public or private.
26.4	Health Officer. Refers to the County Health Officer of the County of Los Angeles or his authorized deputy, agent or representative.
26.5	Industrial Waste. Refers to liquid or solid wastes from industrial or manufacturing operations or processes which are transported from the premises by truck from the premises where they originate to another location for disposal.
28.5	Rubbish. Refers to combustible and non-combustible rubbish or any refuse or waste matter other than garbage.
1611, 1612	Waste Haulers License Required. Every person operating one or more trucks upon or along any public highway who is transporting, conveying, hauling or disposing of rubbish, garbage or industrial waste shall first procure a waste haulers license.

Sect. No.	
1655	Industrial Waste Haulers or Collectors Report. All haulers or collectors of industrial waste shall submit monthly reports to the County Engineer showing the source, quantity and point of disposal of all industrial waste collected.
1657	Legal Disposal. All rubbish, garbage and industrial waste collected or transported upon or along any public highway in the unincorporated area of the County shall be disposed of at a waste disposal facility where such waste can legally be accepted.
1700-1710	Waste Containers. Details the types of containers to be used at the source of the waste and the location where the containers are to be kept for pickup.

SANITARY SEWER AND INDUSTRIAL WASTE - County Ordinance 6130

Sect. No.

4006 Educational Work. Authorizes the County Engineer to perform educational work essential to the development of standards and procedures which will prevent the creation of a public nuisance, menace to the public health, safety or pollution of underground or surface waters.

4007 Joint Action with Other Public Agencies. The County Engineer may contact, confer and negotiate with officials of any public agency and may recommend to the board a contract by which the County or one or more public agencies may jointly exercise any powers pertinent to the enforcement of this ordinance and any similar statute, ordinance, rule or regulation of such public agencies common to all.

5110 Excessive discharge of sewage. Any person proposing to have sewage discharged from any property to a public sewer in quantities or at a rate greater than the capacity for which the sewer was designed, when proportioned to such property and which such additional quantity may overload the sewer, shall be denied a permit to connect any facilities to the sewers which will discharge more than the proportionate share allotted to the property.

5505 Violator and Disconnector. Whenever an industrial connector sewer has been disconnected from the public sewer by the County Engineer for failure to comply with this ordinance, before a permit is issued, the costs of the disconnection made, installation of a manhole for the purpose of measuring the flow or for making periodic tests of the wastes from such connection shall be borne by the applicant.

6101 The provisions of this chapter shall pertain to the disposal of industrial waste to public sewers only.

Sect. No.

6102 Industrial Waste Disposal Permit Required. A person discharging industrial waste into a public sewer shall obtain a permit from the County Engineer if the County Engineer determines that either or both of the following are true.

a - Industrial waste treatment plants or facilities are required by the provisions of this ordinance.

b - Periodic inspection or tests of the character of industrial wastes discharged into a public sewer are necessary to prevent increased maintenance costs or damage to the sewerage system or to insure compliance with the provisions of this ordinance or to the Los Angeles County Plumbing Code.

6105 County Engineer Shall Issue Permits. If it appears from the application that the permit complies with the provisions of this ordinance, the County Engineer upon the receipt of the fees, shall issue the permit.

6106 Industrial Liquid Waste Disposal. Before granting an Industrial Waste Disposal Permit, the County Engineer shall determine either that the waste will not damage or destroy the public sewer or cause an unwarranted increase in the cost of maintenance of the public sewer, retard or inhibit the treatment of the sewage or is one that can be made acceptable by pretreatment.

6107 Pretreatment Plans Required. In the event pretreatment or special facilities are required to make the waste acceptable, the applicant for an Industrial Waste Disposal Permit may be required to furnish plans showing the method of collections and the pretreatment proposed to be used.

6108 Limitations on Use of Sewer. A person shall not place, throw, deposit, cause or permit to be placed in any sewer or main line sewer any solid matters, vegetable waste, materials or obstructions of any kind of such nature as shall clog, obstruct, fill such sewer,

Sect. No.	
6108	Limitations on Use of Sewer (continued) interfere with or prevent the effective use or operation.
6110	Garbage resulting from the preparation of food may be discharged into the public sewer if ground to a fineness sufficient to pass through a 3/8-inch screen. Excessive or unnecessarily large quantities of water shall not be used to flush ground garbage into the sewer.
6112	Temperature of the Effluent. A person shall not discharge into the public sewer effluent to a temperature exceeding 140 degrees Fahrenheit.
6113	Before any person shall discharge acids or alkalis into the public sewer, he shall control the pH to the extent which the County Engineer finds adequate.
6114	Toxic Substances. All toxic chemical substances shall be retained or rendered acceptable before discharge into the public sewer.
6201	Discharge of Public Waste other than to the Public Sewer. This chapter pertains to the disposal, discharge or deposit of all industrial waste including effluents from public sewers and water pollution control plants except where such wastes are discharged into a public sewer in accordance with Sections 6100.
6202	Industrial Waste Disposal Permit Required. A person shall not maintain a deposit of waste material, discharge, deposit or cause or suffer to be discharged or deposited, except as otherwise provided in this ordinance, any waste material or effluent in or upon unincorporated territory of the County of Los Angeles without first securing a permit from the County Engineer.
6204, 6205	Application and Plans for a Permit. Details the procedure for obtaining a permit from the County Engineer.

Sect. No.	
6207, 6208, 6209	Permit Review by Other County Departments. The County Engineer shall notify the County Health Officer and other affected public agencies for their recommendations regarding the permit.
6301	A person shall not discharge, deposit, cause or suffer to be discharged or deposited at any time or allow the continued existence of a deposit of any material which may create a public nuisance or menace to the public health or safety or which may pollute underground or surface waters or which may cause damage to any storm drain channel or public or private property.
6309	Notice to Correct Violations. When the County Engineer finds that industrial waste, effluent or other material is being maintained, discharged or deposited in such a manner as to create, or if allowed to continue will create, a public nuisance, a menace to the public safety or that the permittee has failed to conform with conditions or limitations of any permit issued in accordance with this ordinance, he may serve notice of violation upon the person owning or operating the premises and requiring prompt correction thereof and failure to comply with such notice shall constitute a willful violation of this ordinance.
6314	Discontinuance of Discharge or Deposit. A person whose permit has been suspended, or who has been notified of violation, as provided in this ordinance, shall immediately discontinue the deposit or discharge of industrial waste, sewage or effluent, or use any described facility, and shall not resume such deposit or discharge or use the described facility, until a permit has been issued or reinstated by the County Engineer or Board as hereinafter provided.
6501	Industrial Waste Treatment Plants or Facilities Required. Industrial waste treatment plants or facilities shall be installed whenever the County Engineer shall find that such facilities are required to safeguard the public health, prevent damage or increased

Sect. No.

6501 Industrial Waste Treatment Plants or Facilities Required (continued) maintenance costs in the sewerage system, prevent damage to public or private property, prevent a public nuisance or to comply with the applicable regulations of any other public agency.

6505 Inspection of Treatment Plants or Facilities. The County Engineer shall make periodic inspections of water pollution control plants and industrial waste treatment plants or facilities to determine whether such treatment plants or facilities are maintained in accordance with the requirements of this ordinance. The County Engineer shall also make periodic tests on samples of sewage, industrial waste or effluents obtained at the point of discharge or deposit to determine whether such discharges or deposits are made in accordance with the provisions of this ordinance.

PUBLIC HEALTH CODE - County Ordinance 7583

Sect. No.	
380	Refrigerator Drains. No drain from any refrigerator or icebox used for storage, preparation or display of food, shall be connected directly to any sewer.
500	Review of Plans. The health officer shall have the authority to review and approve all plans and specifications pertaining to sewage and industrial waste disposal systems.
500.1	Industrial Waste. No person shall discharge any materials or liquid wastes directly or indirectly into any channel, drain, watercourse, water or subsurface water in such a manner as may adversely or unreasonably affect such waters for domestic, recreational or other beneficial uses. This section does not apply where County Ordinance 6130 (Industrial Waste) is in effect.
600	Deposit of Refuse. No person shall permit any sewage effluent, market refuse or rubbish to be deposited upon the surface of any premise or in any manner that might contaminate the area.
601	Garbage. Garbage and putrescible matter shall be kept in water tight containers which shall be cleaned each time the contents are removed and such garbage or putrescible material shall not be kept for more than 7 days.
603	Rubbish. Rubbish may be deposited and kept for not more than 15 days.
605	Responsibility for Garbage, Rubbish, Refuse and other Waste. The owner, agent or manager of any premises shall maintain such premises in a clean, sanitary condition, free from accumulations of garbage, rubbish, refuse and other wastes.
610	Disposal of Hazardous Material. Materials which are infected or contaminated, chemically hazardous or radioactive shall be disposed of in a manner approved by the Health Officer.

MECHANICAL CODE - County Ordinance 9544

Sect. No.

1801 Incinerators. Incinerators for the reduction of refuse, garbage and other waste materials shall be installed in accordance with the provisions of this Chapter 18. Materials and structural design shall meet the requirements of the Building Code.

1803 Incinerators Using the Flue as a Refuse Chute. Incinerators in which no fuel other than normal refuse, except a gas flame or similar means to accomplish ignition, is used for combustion, and in which the chute and smoke flue are identifical, shall have the restrictions as here listed.

The combined chute and flue shall be constructed as required for incinerator chimneys in Section 3702 (d) 5 of the Building Code. Such chute and flue shall be constructed straight and plumb, and finished smooth on the inside. All flues shall terminate in a substantially constructed spark arrester having a mesh not exceeding three-fourths inch.

Service openings into the chute shall be equipped with approved self-closing hoppers so constructed that the openings are closed off while the hopper is being charged and no part will project into the chute or flue. The area of the service opening shall not exceed one-third of the area of the chute or flue.

COUNTY AIR POLLUTION CONTROL DISTRICT

Administration of the Permit System

Page No.	
46	Incineration. Incineration involves the disposition of combustible waste material, containing carbon in a free or combined state. Incineration may utilize various groupings of devices or mechanisms comprising permit units.
70	Vapor Combustion Device. A vapor combustion device is designed for the complete oxidation of combustion air contaminants. Details of the device are covered on the remainder of the page.

POLICY OF COUNTY SANITATION DISTRICT

from

Policy Governing Use of the Sanitary Sewer District Trunk Servers

Dated December 6, 1961

An investigation of the specific waste will determine, in each instance, whether or not it is acceptable in the form it is generated or whether it must be subjected to treatment prior to discharge to the sewer.

Wastes will not:

1 - Damage structures.

2 - Create nuisances such as odors.

3 - Menace public health.

4 - Interfere with sewage treatment processes.

5 - Impose abnormal costs on the Districts for collecting and disposing of the wastes.

CALIFORNIA ADMINISTRATIVE CODE - Title 17
Public Health

Sect. No.	
299	Sanitation in Hospitals. All kitchens and kitchen areas shall be free of litter and rubbish.
313, 871.7	Hospitals. Garbage shall be stored and disposed of in a manner that will not permit the transmission of a communicable disease etc. All containers for garbage shall be water-tight, have tight fitting covers, and be rodent proof.
314, 429	Incineration. Infected and surgical dressings and other similar materials shall be disposed of in an incinerator which will provide complete combustion. Substitute methods of handling waste materials such as treating refuse to make it safe for handling, packaging the material and transporting it to a landfill operation or joint use of one incinerator by the local institutions are permitted if the method is approved by the local health officer.
430e	Chutes. Laundry and trash chutes shall have a minimum diameter of 24 inches.
438	Sewerage System. A public sewerage system shall be used for the discharge of sewage if available. Otherwise an independent sewerage system approved by both local and state health departments shall be provided.
440	Garbage and Trash Storage. An area of not less than 25 square feet shall be provided for the storage, washing and cleaning of garbage cans and for the storage of trash.
30285	Radioactive Waste Disposal. No user shall dispose of any radioactive material as waste except as noted in this section.

30287 No user shall discharge radioactive material into a sanitary sewerage system except as noted in this section.

30288 No user shall dispose of radioactive material by burial in soil except as noted in this section.

CALIFORNIA ADMINISTRATIVE CODE - Title 19
Public Safety

Sect. No.

51.08 Incinerators. Incinerators for the reduction of refuse, garbage or other waste materials shall be installed in accordance with the provisions of this section.

65.02 Incinerators. Unless other approved means are provided for the prompt disposal of rubbish, an approved incinerator shall be provided and maintained for the disposal of combustible waste.

CALIFORNIA HEALTH AND SAFETY CODE

Sect. No.

14 County. County includes City and County.

215 Study of Solid Waste Problems and Needs of State. The department shall conduct the following study:

a - To determine current policies, practices and programs in the state concerning solid waste management.

b - Assess and evaluate current solid waste problems in the state and to make realistic projections of future problems.

c - Evaluate the existing state of art and promising new developments as regards criteria, techniques and methods for dealing with solid wastes.

400 Sanitary Engineering. The State Department of Public Health shall maintain a program of sanitary engineering.

459 Investigation of Health and Sanitary Conditions of Places of Detention. The County Health Officer may investigate health and sanitary conditions in any county jail or other detention facility of the county.

476, 481 Consent of City. When the city consents, the County Health Officer shall enforce and observe the statutes, rules and regulations of public health.

4300 Operation of Crematory Governed by this Chapter. No person shall operate in any city or town any crematory for the destruction by fire heat of garbage, offal or other refuse matter except as provided in this chapter.

4301 Contamination of Atmosphere Forbidden. No such crematory shall be operated except in such a manner as will prevent the propagation of disease thru the contamination of the atmosphere by the gases or fumes arising from the fires or ovens of the crematory.

Sect. No.	
4400	Garbage. Refers to garbage, refuse, cans, bottles, paper, vegetable matter, trash and rubbish.
4401, 4402	Deposit in Navigable Waters. Unlawful to place, deposit or dump garbage in or upon the navigable waters of this state or upon any vessel with such intent.
4475	Prohibits the release of sewage, sludge or garbage upon any street, alley, road or public property except where such public property is set aside for such disposal.
4742.1	Contracts for Disposal of Refuse, Sewage or Industrial Waste. The County Sanitation District may contract with any governmental agency for the handling, treatment or disposal of refuse, sewage or industrial wastes originating within or outside the districts or county area.
5410a	Sewage includes any and all waste substance, liquid or solid associated with human habitation.
5410b	Industrial waste includes all liquid or solid waste substance, not sewage, from any producing, manufacturing or processing operation of whatever nature.
5411	Sewage and industrial waste shall not be discharged in any manner which will result in contamination, pollution or as a nuisance.
24198-24207	Air Pollution Control District. Details the need of and the creation of Air Pollution Control Districts to prevent the air from becoming so polluted with air contaminants as to be injurious to health or to interfere with the comfortable enjoyment of life or property.
24208	Air Contaminant. Includes smoke, charred paper, dust, soot, grime, carbon, noxious acids, fumes, gases, odors or particulate matter.

Sect. No.	
24220	The Board of Supervisors will act as the Air Pollution Control Board of their County.
24243	No person shall discharge air contaminants which can endanger the public's health or damage businesses or property.
25601, 25602	No person shall bury, throw away, or in any manner dispose of radioactive wastes in such a manner as to endanger the lives or health of human beings.
25600, 25601, 25602	Radioactive wastes shall not be disposed of in such a manner as to endanger the lives or health of human beings.
28282	Food processing establishments shall have refuse, dirt and waste products subject to decomposition and fermentation removed daily.
28565	Every restaurant shall be provided with such facilities and equipment to properly store or dispose of all waste material.
28566	Food waste disposals shall be connected to a public or private sewerage system which is designed to properly collect and dispose of such waste.

CALIFORNIA PRIVATE INSTITUTION LICENSING ACT

California Administrative Code - Title 9
Institutions

Sect. No.	
170	Laundries if maintained shall be located so that other areas will be affected in a minimal way from steam, odors, lint and noise.
171	Linens will be stored in closed containers.
185	Incineration or treatment of and waste disposal shall be provided for infected and surgical dressings, etc.

STATEMENT ON CODE SUMMARIES

There does not appear to be any conflicts between the various laws and regulations governing solid waste disposal in multistory buildings and hospitals.

In those cases where incineration is suggested, the emission from the incinerators shall be controlled by the Public Health Department, Fire Department and the Air Pollution Control District.

Reproduced from
best available copy.

NUMERICAL RATING OF HOSPITAL SOLID WASTE SYSTEMS

LAC-USC MEDICAL CENTER

SYSTEM 1

		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
Type of Waste		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	12	50		[illegible]	12	[illegible]	0	[illegible]	3	[illegible]	5	[illegible]	8	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	20	[illegible]
	Safety	10	[illegible]	0	[illegible]		[illegible]	10	[illegible]	0	45		[illegible]	0	[illegible]	0	[illegible]	1	[illegible]	2	[illegible]	3	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	13	[illegible]
	Security	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	5		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	5		[illegible]	0	[illegible]	0	[illegible]	2	[illegible]	1	[illegible]	3	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	3	[illegible]
Surgical, Pathological & Animals	Sanitation	10	[illegible]	15	[illegible]	25	[illegible]	50	[illegible]	15	[illegible]	35	[illegible]	50	[illegible]	5	[illegible]	10	[illegible]	40	[illegible]	55	[illegible]		[illegible]		[illegible]		[illegible]	155	[illegible]
	Safety	2	[illegible]	5	[illegible]	2	[illegible]	9	[illegible]	2	[illegible]	7	[illegible]	9	[illegible]	12	[illegible]	10	[illegible]	5	[illegible]	27	[illegible]		[illegible]		[illegible]		[illegible]	45	[illegible]
	Security	0	[illegible]	0	[illegible]	35	[illegible]	35	[illegible]	0	[illegible]	25	[illegible]	25	[illegible]	2	[illegible]	20	[illegible]	5	[illegible]	27	[illegible]		[illegible]		[illegible]		[illegible]	87	[illegible]
	Esthetics	5	[illegible]	2	[illegible]	11	[illegible]	18	[illegible]	2	[illegible]	11	[illegible]	13	[illegible]	2	[illegible]	15	[illegible]	10	[illegible]	27	[illegible]		[illegible]		[illegible]		[illegible]	[illegible]	[illegible]
Soiled Linen	Sanitation	30	[illegible]	35	[illegible]		[illegible]	65	[illegible]	20	[illegible]		[illegible]	20	[illegible]	0	[illegible]	7	[illegible]	20	[illegible]	27	[illegible]		[illegible]		[illegible]		[illegible]	112	[illegible]
	Safety	2	[illegible]	2	[illegible]		[illegible]	4	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	1	[illegible]	7	[illegible]	8	[illegible]		[illegible]		[illegible]		[illegible]	12	[illegible]
	Security	2	[illegible]	2	[illegible]		[illegible]	4	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	2	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	6	[illegible]
	Esthetics	15	[illegible]	10	[illegible]		[illegible]	25	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]		[illegible]		[illegible]		[illegible]	[illegible]	[illegible]
Rubbish	Sanitation	2	[illegible]	5	[illegible]		[illegible]	7	[illegible]	5	[illegible]		[illegible]	5	[illegible]	0	[illegible]	2	[illegible]	4	[illegible]	6	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	[illegible]	[illegible]
	Safety	7	[illegible]	10	[illegible]		[illegible]	17	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	4	[illegible]	[illegible]	[illegible]	12	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	[illegible]	[illegible]
	Security	2	[illegible]	2	[illegible]		[illegible]	4	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	4	[illegible]
	Esthetics	15	[illegible]	7	[illegible]		[illegible]	22	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	[illegible]	[illegible]
Reusable Patient Items	Sanitation		[illegible]	10	[illegible]	5	[illegible]	15	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	15	[illegible]
	Safety		[illegible]	10	[illegible]	0	[illegible]	10	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	10	[illegible]
	Security		[illegible]	0	[illegible]	7	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
	Esthetics		[illegible]	2	[illegible]	2	[illegible]	4	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	4	[illegible]
Non-Combustible	Sanitation	2	[illegible]	5	[illegible]		[illegible]	7	[illegible]	4	[illegible]		[illegible]	4	[illegible]	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Safety	10	[illegible]	5	[illegible]		[illegible]	15	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	0	[illegible]	13	[illegible]	13	[illegible]	32	[illegible]
	Security	5	[illegible]	0	[illegible]		[illegible]	5	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	15	[illegible]	15	[illegible]	20	[illegible]
	Esthetics	5	[illegible]	2	[illegible]		[illegible]	7	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	13	[illegible]
Garbage (Non-Grindable)	Sanitation	2	[illegible]	2	[illegible]		[illegible]	4	[illegible]	1	[illegible]		[illegible]	1	[illegible]	0	[illegible]	1	[illegible]	4	[illegible]	5	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	[illegible]	[illegible]
	Safety	2	[illegible]	2	[illegible]		[illegible]	4	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	[illegible]	[illegible]
	Security	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	[illegible]	[illegible]
	Esthetics	4	[illegible]	1	[illegible]		[illegible]	5	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	2	[illegible]	1	[illegible]	3	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	[illegible]	[illegible]
Food Service Items	Sanitation	2	[illegible]	2	[illegible]	7	[illegible]	11	[illegible]	2	[illegible]	7	[illegible]	9	[illegible]	2	[illegible]	2	[illegible]	3	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	27	[illegible]
	Safety	5	[illegible]	5	[illegible]	7	[illegible]	17	[illegible]	2	[illegible]	7	[illegible]	9	[illegible]	2	[illegible]	2	[illegible]	0	[illegible]	4	[illegible]		[illegible]		[illegible]		[illegible]	[illegible]	[illegible]
	Security	0	[illegible]	1	[illegible]	5	[illegible]	6	[illegible]	2	[illegible]	5	[illegible]	7	[illegible]	2	[illegible]	5	[illegible]	2	[illegible]	9	[illegible]		[illegible]		[illegible]		[illegible]	[illegible]	[illegible]
	Esthetics	2	[illegible]	2	[illegible]	3	[illegible]	7	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	2	[illegible]	5	[illegible]	2	[illegible]	9	[illegible]		[illegible]		[illegible]		[illegible]	20	[illegible]
Total	Sanitation	48	[illegible]	74	[illegible]	37	[illegible]	[illegible]	[illegible]	59	[illegible]	42	[illegible]	101	[illegible]	7	[illegible]	26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Safety	38	[illegible]	39	[illegible]	9	[illegible]	86	[illegible]	4	[illegible]	14	[illegible]	18	[illegible]	14	[illegible]	23	[illegible]	[illegible]	[illegible]	60	[illegible]	0	[illegible]	13	[illegible]	13	[illegible]	177	[illegible]
	Security	9	[illegible]	5	[illegible]	47	[illegible]	61	[illegible]	2	[illegible]	30	[illegible]	32	[illegible]	4	[illegible]	25	[illegible]	9	[illegible]	[illegible]	[illegible]	0	[illegible]	15	[illegible]	15	[illegible]	[illegible]	[illegible]
	Esthetics	46	[illegible]	34	[illegible]	16	[illegible]	[illegible]	[illegible]	4	[illegible]	13	[illegible]	17	[illegible]	4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOTAL		141	415	144	[illegible]	109	[illegible]	394	[illegible]	69	415	99	465	[illegible]	[illegible]	29	[illegible]	102	[illegible]	127	[illegible]	258	[illegible]	4	[illegible]	60	[illegible]	64	[illegible]	[illegible]	[illegible]

SYSTEM 2

		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
Type of Waste		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	12	50		[illegible]	12	[illegible]	0	[illegible]	3	[illegible]	10	[illegible]	13	[illegible]		[illegible]		[illegible]		[illegible]	25	[illegible]
	Safety	10	[illegible]	0	[illegible]		[illegible]	10	[illegible]	0	45		[illegible]	0	[illegible]	0	[illegible]	1	[illegible]	5	[illegible]	6	[illegible]		[illegible]		[illegible]		[illegible]	16	[illegible]
	Security	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	5		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	0	[illegible]
	Esthetics	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	5		[illegible]	0	[illegible]	0	[illegible]	2	[illegible]	5	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
Surgical, Pathological & Animals	Sanitation	10	[illegible]	15	[illegible]	25	[illegible]	50	[illegible]	15	[illegible]	35	[illegible]	50	[illegible]	5	[illegible]	10	[illegible]	40	[illegible]	55	[illegible]		[illegible]		[illegible]		[illegible]	155	[illegible]
	Safety	2	[illegible]	5	[illegible]	2	[illegible]	9	[illegible]	2	[illegible]	7	[illegible]	9	[illegible]	12	[illegible]	10	[illegible]	5	[illegible]	27	[illegible]		[illegible]		[illegible]		[illegible]	45	[illegible]
	Security	0	[illegible]	0	[illegible]	35	[illegible]	35	[illegible]	0	[illegible]	25	[illegible]	25	[illegible]	2	[illegible]	20	[illegible]	5	[illegible]	27	[illegible]		[illegible]		[illegible]		[illegible]	87	[illegible]
	Esthetics	5	[illegible]	2	[illegible]	11	[illegible]	18	[illegible]	2	[illegible]	11	[illegible]	13	[illegible]	2	[illegible]	15	[illegible]	10	[illegible]	27	[illegible]		[illegible]		[illegible]		[illegible]	58	[illegible]
Soiled Linen	Sanitation	30	[illegible]	35	[illegible]		[illegible]	65	[illegible]	20	[illegible]		[illegible]	20	[illegible]	0	[illegible]	7	[illegible]	20	[illegible]	27	[illegible]		[illegible]		[illegible]		[illegible]	112	[illegible]
	Safety	2	[illegible]	2	[illegible]		[illegible]	4	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	1	[illegible]	7	[illegible]	8	[illegible]		[illegible]		[illegible]		[illegible]	12	[illegible]
	Security	2	[illegible]	2	[illegible]		[illegible]	4	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	2	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	6	[illegible]
	Esthetics	15	[illegible]	10	[illegible]		[illegible]	25	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]		[illegible]		[illegible]		[illegible]	[illegible]	[illegible]
Rubbish	Sanitation	2	[illegible]	5	[illegible]		[illegible]	7	[illegible]	5	[illegible]		[illegible]	5	[illegible]	0	[illegible]	2	[illegible]	8	[illegible]	10	[illegible]		[illegible]		[illegible]		[illegible]	22	[illegible]
	Safety	7	[illegible]	10	[illegible]		[illegible]	17	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	6	[illegible]	12	[illegible]	18	[illegible]		[illegible]		[illegible]		[illegible]	35	[illegible]
	Security	2	[illegible]	2	[illegible]		[illegible]	4	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	4	[illegible]
	Esthetics	15	[illegible]	7	[illegible]		[illegible]	22	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	1	[illegible]	5	[illegible]	6	[illegible]		[illegible]		[illegible]		[illegible]	[illegible]	[illegible]
Reusable Patient Items	Sanitation		[illegible]	10	[illegible]	5	[illegible]	15	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	15	[illegible]
	Safety		[illegible]	10	[illegible]	0	[illegible]	10	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	10	[illegible]
	Security		[illegible]	0	[illegible]	7	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
	Esthetics		[illegible]	2	[illegible]	2	[illegible]	4	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	4	[illegible]
Non-Combustible	Sanitation	2	[illegible]	5	[illegible]		[illegible]	7	[illegible]	4	[illegible]		[illegible]	4	[illegible]	0	[illegible]	1	[illegible]	3	[illegible]	4	[illegible]	2	[illegible]	15	[illegible]	17	[illegible]	[illegible]	[illegible]
	Safety	10	[illegible]	5	[illegible]		[illegible]	15	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	2	[illegible]	5	[illegible]	7	[illegible]	2	[illegible]	6	[illegible]	8	[illegible]	30	[illegible]
	Security	5	[illegible]	0	[illegible]		[illegible]	5	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	5	[illegible]
	Esthetics	5	[illegible]	2	[illegible]		[illegible]	7	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	1	[illegible]	5	[illegible]	6	[illegible]		[illegible]	1	[illegible]	2	[illegible]	16	[illegible]
Garbage (Non-Grindable)	Sanitation	2	[illegible]	2	[illegible]		[illegible]	4	[illegible]	1	[illegible]		[illegible]	1	[illegible]	0	[illegible]	1	[illegible]	8	[illegible]	9	[illegible]		[illegible]		[illegible]		[illegible]	14	[illegible]
	Safety	2	[illegible]	2	[illegible]		[illegible]	4	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	1	[illegible]	3	[illegible]	4	[illegible]		[illegible]		[illegible]		[illegible]	8	[illegible]
	Security	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	0	[illegible]
	Esthetics	4	[illegible]	1	[illegible]		[illegible]	5	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	2	[illegible]	5	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	12	[illegible]
Food Service Items	Sanitation	2	[illegible]	2	[illegible]	7	[illegible]	11	[illegible]	2	[illegible]	7	[illegible]	9	[illegible]	2	[illegible]	2	[illegible]	3	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	27	[illegible]
	Safety	5	[illegible]	5	[illegible]	7	[illegible]	17	[illegible]	2	[illegible]	7	[illegible]	9	[illegible]	2	[illegible]	2	[illegible]	0	[illegible]	4	[illegible]		[illegible]		[illegible]		[illegible]	30	[illegible]
	Security	0	[illegible]	1	[illegible]	5	[illegible]	6	[illegible]	2	[illegible]	5	[illegible]	7	[illegible]	2	[illegible]	5	[illegible]	2	[illegible]	9	[illegible]		[illegible]		[illegible]		[illegible]	22	[illegible]
	Esthetics	2	[illegible]	2	[illegible]	3	[illegible]	7	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	2	[illegible]	5	[illegible]	2	[illegible]	9	[illegible]		[illegible]		[illegible]		[illegible]	20	[illegible]
Total	Sanitation	48	[illegible]	74	[illegible]	37	[illegible]	159	[illegible]	59	[illegible]	42	[illegible]	101	[illegible]	7	[illegible]	[illegible]	[illegible]	92	[illegible]	125	[illegible]	2	[illegible]	15	[illegible]	17	[illegible]	402	[illegible]
	Safety	38	[illegible]	39	[illegible]	9	[illegible]	86	[illegible]	4	[illegible]	14	[illegible]	18	[illegible]	14	[illegible]	23	[illegible]	37	[illegible]	74	[illegible]	2	[illegible]	6	[illegible]	8	[illegible]	[illegible]	[illegible]
	Security	9	[illegible]	5	[illegible]	47	[illegible]	61	[illegible]	2	[illegible]	30	[illegible]	32	[illegible]	4	[illegible]	25	[illegible]	9	[illegible]	[illegible]	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	131	[illegible]
	Esthetics	46	[illegible]	34	[illegible]	16	[illegible]	[illegible]	[illegible]	4	[illegible]	13	[illegible]	17	[illegible]	4	[illegible]	[illegible]	[illegible]	34	[illegible]	[illegible]	[illegible]		[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOTAL		141	415	144	[illegible]	109	[illegible]	394	[illegible]	69	415	99	465	168	[illegible]	29	[illegible]	103	[illegible]	172	[illegible]	303	[illegible]	5	[illegible]	22	[illegible]	27	[illegible]	892	[illegible]

Reproduced from best available copy.

NUMERICAL RATING OF HOSPITAL SOLID WASTE SYSTEMS

LAC-USC MEDICAL CENTER

SYSTEMS 3

Type of Waste		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal				Vertical Transfer		Intermediate Storage, Processing, Disposal				Internal Transfer		Central Storage		Central Processing or Disposal				External Transfer		Final Processing and/or Disposal					
		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value Total	Max. Value Total	Def. Value	Max. Value	Def. Value	Max Value	Def Value Total	Max. Value Total	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value Total	Max. Value Total	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
Sharps, Needles, Etc.	Sanitation	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	12	[illegible]		[illegible]	12	[illegible]	0	[illegible]	3	[illegible]	5	[illegible]	8	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	20	[illegible]
	Safety	10	[illegible]	0	[illegible]		[illegible]	10	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	1	[illegible]	2	[illegible]	3	[illegible]	0	[illegible]	20	[illegible]	20	[illegible]	33	[illegible]
	Security	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	60	[illegible]	60	[illegible]	60	[illegible]
	Esthetics	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	2	[illegible]	1	[illegible]	3	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	3	[illegible]
Surgical, Pathological & Animals	Sanitation	10	[illegible]	15	[illegible]	25	[illegible]	50	[illegible]	15	[illegible]	35	[illegible]	50	[illegible]	5	[illegible]	10	[illegible]	40	[illegible]	55	[illegible]		[illegible]		[illegible]		[illegible]	155	[illegible]
	Safety	2	[illegible]	5	[illegible]	2	[illegible]	9	[illegible]	2	[illegible]	7	[illegible]	9	[illegible]	12	[illegible]	10	[illegible]	5	[illegible]	27	[illegible]		[illegible]		[illegible]		[illegible]	45	[illegible]
	Security	0	[illegible]	0	[illegible]	35	[illegible]	35	[illegible]	0	[illegible]	25	[illegible]	25	[illegible]	2	[illegible]	20	[illegible]	5	[illegible]	27	[illegible]		[illegible]		[illegible]		[illegible]	87	[illegible]
	Esthetics	5	[illegible]	2	[illegible]	11	[illegible]	18	[illegible]	2	[illegible]	11	[illegible]	13	[illegible]	2	[illegible]	15	[illegible]	10	[illegible]	27	[illegible]		[illegible]		[illegible]		[illegible]	58	[illegible]
Soiled Linen	Sanitation	30	[illegible]	35	[illegible]		[illegible]	65	[illegible]	20	[illegible]		[illegible]	20	[illegible]	0	[illegible]	7	[illegible]	20	[illegible]	27	[illegible]		[illegible]		[illegible]		[illegible]	112	[illegible]
	Safety	2	[illegible]	2	[illegible]		[illegible]	4	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	1	[illegible]	7	[illegible]	8	[illegible]		[illegible]		[illegible]		[illegible]	12	[illegible]
	Security	2	[illegible]	2	[illegible]		[illegible]	4	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	2	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	6	[illegible]
	Esthetics	15	[illegible]	10	[illegible]		[illegible]	25	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]		[illegible]		[illegible]		[illegible]	29	[illegible]
Rubbish	Sanitation	2	[illegible]	5	[illegible]		[illegible]	7	[illegible]	5	[illegible]		[illegible]	5	[illegible]	0	[illegible]	2	[illegible]	4	[illegible]	6	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	18	[illegible]
	Safety	7	[illegible]	10	[illegible]		[illegible]	17	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	6	[illegible]	6	[illegible]	12	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	29	[illegible]
	Security	2	[illegible]	2	[illegible]		[illegible]	4	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	30	[illegible]	30	[illegible]	34	[illegible]
	Esthetics	15	[illegible]	7	[illegible]		[illegible]	22	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	24	[illegible]
Reusable Patient Items	Sanitation		[illegible]	10	[illegible]	5	[illegible]	15	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	15	[illegible]
	Safety		[illegible]	10	[illegible]	0	[illegible]	10	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	10	[illegible]
	Security		[illegible]	0	[illegible]	7	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
	Esthetics		[illegible]	2	[illegible]	2	[illegible]	4	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	4	[illegible]
Non-Combustible	Sanitation	2	[illegible]	5	[illegible]		[illegible]	7	[illegible]	4	[illegible]		[illegible]	4	[illegible]	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	2	[illegible]	10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Safety	10	[illegible]	5	[illegible]		[illegible]	15	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	1	[illegible]	6	[illegible]	7	[illegible]	26	[illegible]
	Security	5	[illegible]	0	[illegible]		[illegible]	5	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	15	[illegible]	15	[illegible]	20	[illegible]
	Esthetics	5	[illegible]	2	[illegible]		[illegible]	7	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	13	[illegible]
Garbage (Non-Grindable)	Sanitation	2	[illegible]	2	[illegible]		[illegible]	4	[illegible]	1	[illegible]		[illegible]	1	[illegible]	0	[illegible]	1	[illegible]	4	[illegible]	5	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	10	[illegible]
	Safety	2	[illegible]	2	[illegible]		[illegible]	4	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	6	[illegible]
	Security	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	5	[illegible]	5	[illegible]	5	[illegible]
	Esthetics	4	[illegible]	1	[illegible]		[illegible]	5	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	2	[illegible]	1	[illegible]	3	[illegible]	4	[illegible]	0	[illegible]	4	[illegible]	12	[illegible]
Food Service Items	Sanitation	2	[illegible]	2	[illegible]	7	[illegible]	11	[illegible]	2	[illegible]	7	[illegible]	9	[illegible]	2	[illegible]	2	[illegible]	3	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	27	[illegible]
	Safety	5	[illegible]	5	[illegible]	7	[illegible]	17	[illegible]	2	[illegible]	7	[illegible]	9	[illegible]	2	[illegible]	2	[illegible]	0	[illegible]	4	[illegible]		[illegible]		[illegible]		[illegible]	30	[illegible]
	Security	0	[illegible]	1	[illegible]	5	[illegible]	6	[illegible]	2	[illegible]	5	[illegible]	7	[illegible]	2	[illegible]	5	[illegible]	2	[illegible]	9	[illegible]		[illegible]		[illegible]		[illegible]	22	[illegible]
	Esthetics	2	[illegible]	2	[illegible]	3	[illegible]	7	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	2	[illegible]	5	[illegible]	2	[illegible]	9	[illegible]		[illegible]		[illegible]		[illegible]	20	[illegible]
Total	Sanitation	48	[illegible]	74	[illegible]	37	[illegible]	159	[illegible]	59	[illegible]	42	[illegible]	101	[illegible]	7	[illegible]	26	[illegible]	77	[illegible]	110	[illegible]	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Safety	38	[illegible]	39	[illegible]	9	[illegible]	86	[illegible]	4	[illegible]	14	[illegible]	18	[illegible]	14	[illegible]	23	[illegible]	23	[illegible]	60	[illegible]	1	[illegible]	[illegible]	[illegible]	27	[illegible]	191	[illegible]
	Security	9	[illegible]	5	[illegible]	47	[illegible]	61	[illegible]	2	[illegible]	30	[illegible]	32	[illegible]	4	[illegible]	25	[illegible]	9	[illegible]	38	[illegible]	0	[illegible]	110	[illegible]	110	[illegible]	241	[illegible]
	Esthetics	46	[illegible]	26	[illegible]	16	[illegible]	88	[illegible]	4	[illegible]	13	[illegible]	17	[illegible]	4	[illegible]	28	[illegible]	18	[illegible]	50	[illegible]	6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOTAL		141	[illegible]	144	[illegible]	109	[illegible]	394	[illegible]	69	415	99	465	168	[illegible]	29	[illegible]	102	[illegible]	127	[illegible]	258	[illegible]	9	[illegible]	148	[illegible]	177	1118	997	[illegible]

SYSTEM 4

Type of Waste		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal				Vertical Transfer		Intermediate Storage, Processing, Disposal				Internal Transfer		Central Storage		Central Processing or Disposal				External Transfer		Final Processing and/or Disposal					
		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value Total	Max. Value Total	Def Value	Max. Value	Def. Value	Max Value	Def Value Total	Max. Value Total	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value Total	Max. Value Total	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
Sharps, Needles, Etc.	Sanitation	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	12	[illegible]		[illegible]	12	[illegible]	0	[illegible]	3	[illegible]	5	[illegible]	8	[illegible]	5	[illegible]	40	[illegible]	45	[illegible]	65	[illegible]
	Safety	10	[illegible]	0	[illegible]		[illegible]	10	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	1	[illegible]	2	[illegible]	3	[illegible]	2	[illegible]	38	[illegible]	40	[illegible]	53	[illegible]
	Security	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	2	[illegible]	1	[illegible]	3	[illegible]	1	[illegible]	5	[illegible]	6	[illegible]	9	[illegible]
Surgical, Pathological & Animals	Sanitation	10	[illegible]	15	[illegible]	25	[illegible]	50	[illegible]	15	[illegible]	35	[illegible]	50	[illegible]	5	[illegible]	10	[illegible]	40	[illegible]	55	[illegible]		[illegible]		[illegible]		[illegible]	155	[illegible]
	Safety	2	[illegible]	5	[illegible]	2	[illegible]	9	[illegible]	2	[illegible]	7	[illegible]	9	[illegible]	12	[illegible]	10	[illegible]	5	[illegible]	27	[illegible]		[illegible]		[illegible]		[illegible]	45	[illegible]
	Security	0	[illegible]	0	[illegible]	35	[illegible]	35	[illegible]	0	[illegible]	25	[illegible]	25	[illegible]	2	[illegible]	20	[illegible]	5	[illegible]	27	[illegible]		[illegible]		[illegible]		[illegible]	87	[illegible]
	Esthetics	5	[illegible]	2	[illegible]	11	[illegible]	18	[illegible]	2	[illegible]	11	[illegible]	13	[illegible]	2	[illegible]	15	[illegible]	10	[illegible]	27	[illegible]		[illegible]		[illegible]		[illegible]	58	[illegible]
Soiled Linen	Sanitation	30	[illegible]	35	[illegible]		[illegible]	65	[illegible]	20	[illegible]		[illegible]	20	[illegible]	0	[illegible]	7	[illegible]	20	[illegible]	27	[illegible]		[illegible]		[illegible]		[illegible]	112	[illegible]
	Safety	2	[illegible]	2	[illegible]		[illegible]	4	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	1	[illegible]	7	[illegible]	8	[illegible]		[illegible]		[illegible]		[illegible]	12	[illegible]
	Security	2	[illegible]	2	[illegible]		[illegible]	4	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	2	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	6	[illegible]
	Esthetics	15	[illegible]	10	[illegible]		[illegible]	25	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]		[illegible]		[illegible]		[illegible]	29	[illegible]
Rubbish	Sanitation	2	[illegible]	5	[illegible]		[illegible]	7	[illegible]	5	[illegible]		[illegible]	5	[illegible]	0	[illegible]	2	[illegible]	4	[illegible]	6	[illegible]	2	[illegible]	28	[illegible]	30	[illegible]	48	[illegible]
	Safety	7	[illegible]	10	[illegible]		[illegible]	17	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	6	[illegible]	6	[illegible]	12	[illegible]	2	[illegible]	12	[illegible]	14	[illegible]	43	[illegible]
	Security	2	[illegible]	2	[illegible]		[illegible]	4	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	4	[illegible]
	Esthetics	15	[illegible]	7	[illegible]		[illegible]	22	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	6	[illegible]	30	[illegible]
Reusable Patient Items	Sanitation		[illegible]	10	[illegible]	5	[illegible]	15	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	15	[illegible]
	Safety		[illegible]	10	[illegible]	0	[illegible]	10	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	10	[illegible]
	Security		[illegible]	0	[illegible]	7	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
	Esthetics		[illegible]	2	[illegible]	2	[illegible]	4	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	4	[illegible]
Non-Combustible	Sanitation	2	[illegible]	5	[illegible]		[illegible]	7	[illegible]	4	[illegible]		[illegible]	4	[illegible]	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Safety	10	[illegible]	5	[illegible]		[illegible]	15	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	0	[illegible]	13	[illegible]	13	[illegible]	32	[illegible]
	Security	5	[illegible]	0	[illegible]		[illegible]	5	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	13	[illegible]	15	[illegible]	20	[illegible]
	Esthetics	5	[illegible]	2	[illegible]		[illegible]	7	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	13	[illegible]
Garbage (Non-Grindable)	Sanitation	2	[illegible]	2	[illegible]		[illegible]	4	[illegible]	1	[illegible]		[illegible]	1	[illegible]	0	[illegible]	1	[illegible]	4	[illegible]	5	[illegible]	2	[illegible]	8	[illegible]	10	[illegible]	20	[illegible]
	Safety	2	[illegible]	2	[illegible]		[illegible]	4	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	1	[illegible]	5	[illegible]	6	[illegible]	12	[illegible]
	Security	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	4	[illegible]	1	[illegible]		[illegible]	5	[illegible]	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	2	[illegible]	1	[illegible]	3	[illegible]	4	[illegible]	4	[illegible]	8	[illegible]	16	[illegible]
Food Service Items	Sanitation	2	[illegible]	2	[illegible]	7	[illegible]	11	[illegible]	2	[illegible]	7	[illegible]	9	[illegible]	2	[illegible]	2	[illegible]	3	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	27	[illegible]
	Safety	5	[illegible]	5	[illegible]	7	[illegible]	17	[illegible]	2	[illegible]	7	[illegible]	9	[illegible]	2	[illegible]	2	[illegible]	0	[illegible]	4	[illegible]		[illegible]		[illegible]		[illegible]	30	[illegible]
	Security	0	[illegible]	1	[illegible]	5	[illegible]	6	[illegible]	2	[illegible]	5	[illegible]	7	[illegible]	2	[illegible]	5	[illegible]	2	[illegible]	9	[illegible]		[illegible]		[illegible]		[illegible]	22	[illegible]
	Esthetics	2	[illegible]	2	[illegible]	3	[illegible]	7	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	2	[illegible]	5	[illegible]	2	[illegible]	9	[illegible]		[illegible]		[illegible]		[illegible]	20	[illegible]
Total	Sanitation	48	[illegible]	74	[illegible]	37	[illegible]	159	[illegible]	59	[illegible]	42	[illegible]	101	[illegible]	7	[illegible]	26	[illegible]	77	[illegible]	110	[illegible]	11	[illegible]	105	[illegible]	117	[illegible]	487	[illegible]
	Safety	38	[illegible]	39	[illegible]	9	[illegible]	86	[illegible]	4	[illegible]	14	[illegible]	18	[illegible]	14	[illegible]	23	[illegible]	23	[illegible]	60	[illegible]	5	[illegible]	68	[illegible]	73	[illegible]	237	[illegible]
	Security	9	[illegible]	5	[illegible]	47	[illegible]	61	[illegible]	2	[illegible]	30	[illegible]	32	[illegible]	4	[illegible]	25	[illegible]	9	[illegible]	38	[illegible]	0	[illegible]	15	[illegible]	15	[illegible]	146	[illegible]
	Esthetics	46	[illegible]	26	[illegible]	16	[illegible]	88	[illegible]	4	[illegible]	13	[illegible]	17	[illegible]	4	[illegible]	28	[illegible]	18	[illegible]	50	[illegible]	9	[illegible]	15	[illegible]	24	[illegible]	179	[illegible]
TOTAL		141	[illegible]	144	[illegible]	109	[illegible]	394	[illegible]	69	415	99	465	168	[illegible]	29	[illegible]	102	[illegible]	127	[illegible]	258	[illegible]	25	[illegible]	204	[illegible]	229	1118	1049	[illegible]

ESTIMATED DAILY LABOR COSTS OF HOSPITAL SOLID WASTE SYSTEMS

SYSTEMS 1, 4 & 5

LAC-USC MEDICAL CENTER

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	10.0	$ 57.20	$ 57.20						Equip. Op.II Equip.Op.I	$4.94 5.28	0.3 0.1	$ 1.48 0.53	$ 2.01						$ 59.21
Pathological and Surgical	Lab.Tech. Custodian	4.12 3.71	1.0 0.5	4.12 1.86	5.98	Custodian	$3.71	0.5	$ 1.86	$ 1.86	Lab.Tech.	4.12	3.0	12.36	12.36						20.20
Soiled Linen	Nurse Attendant	5.72 3.34	94.0 94.0	537.68 313.96	851.64						Equip. Op.II	4.94	16.8	82.99	82.99						934.63
Rubbish	Custodian	3.71	525.0	1947.75	1947.75						Equip. Op.II Equip.Op.I	4.94 5.28	6.0 6.6	29.64 34.85	64.49						2012.24
Reusable Patient Items	Nurse Attendant	5.72 3.34	16.0 66.0	91.52 220.44	311.96																311.96
Non-Combustible	Custodian	3.71	10.0	37.10	37.10						Equip. Op.II Equip.Op.I	4.94 5.28	0.3 0.6	1.48 3.17	4.65	Truck Dr.	$4.74	1.0	$4.74	$4.74	46.49
Garbage (Non-Grindable)	Attendant	3.34	3.0	10.02	10.02						Equip. Op.II Equip.Op.I	4.94 5.28	0.6 0.7	2.96 3.70	6.66						16.68
Food Service Items	Nurse Attendant	5.72 3.34	142.0 142.0	812.24 474.28	1286.52	Elev.Op.	3.71	7.25	26.90	26.90	Team Dr. Fd.Srv.Wk Inst.Lab.	4.03 3.42 4.03	3.5 18.0 3.5	14.11 61.56 14.11	89.78						1403.20
Radiological	Lab.Tech. Custodian	4.12 3.71	0.5 0.2	2.06 0.74	2.80	Elev.Op. Custodian	3.71 3.71	0.3 0.3	1.11 1.11	2.22	Custodian	3.71	1.0	3.71							8.73
Ash & Residue	Inst. Lab.	4.03	0.1	0.40	0.40						Equip. Op.II	4.94	0.1	0.49	0.49						0.89
Animal Carcasses	Lab.Tech.	4.12	0.75	3.09	3.09						Lab.Tech.	4.12	0.5	2.06	2.06						5.15
Food Waste (Grindable)	Fd.Srv.Wk	3.42	27.0	92.34	92.34																92.34
					$4606.80					$30.98					$269.20					$4.74	$4911.72

SYSTEM 2

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	10.0	$ 57.20	$ 57.20						Equip. Op.II Inc. Op.	$4.94 5.78	0.3 0.1	$ 1.48 .58	$ 2.06						$ 59.26
Pathological and Surgical	Lab.Tech. Custodian	4.12 3.71	1.0 0.5	4.12 1.86	5.98	Custodian	$3.71	0.5	$ 1.86	$ 1.86	Lab.Tech.	4.12	3.0	12.36	12.36						20.20
Soiled Linen	Nurse Attendant	5.72 3.34	94.0 94.0	537.68 313.96	851.64						Equip. Op.II	4.94	16.8	82.99	82.99						934.63
Rubbish	Custodian	3.71	525.0	1947.75	1947.75						Equip. Op.II Inc. Op.	4.94 5.78	6.0 5.8	29.64 33.52	63.16						2010.91
Reusable Patient Items	Nurse Attendant	5.72 3.34	16.0 66.0	91.52 220.44	311.96																311.96
Non-Combustible	Custodian	3.71	10.0	37.10	37.10						Equip. Op.II Inc. Op.	4.94 5.78	0.4 0.5	1.98 2.89	4.87	Truck Dr.	$4.74	0.5	$2.37	$2.37	44.34
Garbage (Non-Grindable)	Attendant	3.34	3.0	10.02	10.02						Equip. Op.II Inc. Op.	4.94 5.78	0.6 0.6	2.96 3.47	6.43						16.45
Food Service Items	Nurse Attendant	5.72 3.34	142.0 142.0	812.24 474.28	1286.52	Elev.Op.	3.71	7.25	26.90	26.90	Team Dr. Fd.Srv.Wk Inst. Lab.	4.03 3.42 4.03	3.5 18.0 3.5	14.11 61.56 14.11	89.78						1403.20
Radiological	Lab.Tech. Custodian	4.12 3.71	0.5 0.2	2.06 0.74	2.80	Elev.Op. Custodian	3.71 3.71	0.3 0.3	1.11 1.11	2.22	Custodian	3.71	1.0	3.71	3.71						8.73
Ash & Residue	Inst. Lab.	4.03	0.1	0.40	0.40						Inc. Op.	5.78	1.0	5.78	5.78	Truck Dr.	4.74	0.5	2.37	2.37	8.55
Animal Carcasses	Lab.Tech.	4.12	0.75	3.09	3.09						Lab.Tech.	4.12	0.5	2.06	2.06						5.15
Food Waste (Grindable)	Fd.Srv.Wk	3.42	27.0	92.34	92.34																92.34
					$4606.80					$30.98					$273.20					$4.74	$4915.72

ESTIMATED DAILY LABOR COSTS OF HOSPITAL SOLID WASTE SYSTEMS
SYSTEMS 3, 6 & 7

LAC-USC MEDICAL CENTER

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	10.0	57.20	$ 57.20						Equip.Op.I	$5.28	0.1	$ 0.53	$ 2.01	Truck Dr.	$4.74	0.1	$ 0.47	$ 0.47	$ 59.68
											Equip. Op. II	4.94	0.3	1.48							
Pathological and Surgical	Lab.Tech.	4.12	1.0	4.12	5.98	Custodian	$3.71	0.5	$ 1.86	$ 1.86	Lab.Tech.	4.12	3.0	12.36	12.36						20.20
	Custodian	3.71	0.5	1.86																	
Soiled Linen	Nurse	5.72	94.0	537.68	851.64						Equip. Op. II	4.94	16.8	82.99	82.99						934.63
	Attendant	3.34	94.0	313.96																	
Rubbish	Custodian	3.71	525.0	1947.75	1947.75						Equip.Op.I	5.28	6.6	34.85	64.49	Truck Dr.	4.74	6.6	31.28	31.28	2043.52
											Equip. Op. II	4.94	6.0	29.64							
Reusable Patient Items	Nurse	5.72	16.0	91.52	311.96																311.96
	Attendant	3.34	66.0	220.44																	
Non-Combustible	Custodian	3.71	10.0	37.10	37.10						Equip.Op.I	5.28	0.6	3.17	4.65	Truck Dr.	4.74	0.6	2.84	2.84	44.59
											Equip. Op. II	4.94	0.3	1.48							
Garbage (Non-Grindable)	Attendant	3.34	3.0	10.02	10.02						Equip.Op.I	5.28	0.7	3.70	6.66	Truck Dr.	4.74	0.6	2.84	2.84	19.52
											Equip. Op. II	4.94	0.6	2.96							
Food Service Items	Nurse	5.72	142.0	812.24	1286.52	Elev.Op.	3.71	7.25	26.90	26.90	Trans Dr.	4.03	3.5	14.11	89.78						1403.20
	Attendant	3.34	142.0	474.28							Fd.Srv.Wk	3.42	18.0	61.56							
											Inst. Lab.	4.03	3.5	14.11							
Radiological	Lab.Tech.	4.12	0.5	2.06	2.80	Elev.Op.	3.71	0.3	1.11	2.22	Custodian	3.71	1.0	3.71	3.71						8.73
	Custodian	3.71	0.2	0.74		Custodian	3.71	0.3	1.11												
Ash & Residue	Inst. Lab.	4.03	0.1	0.40	0.40						Equip. Op. II	4.94	0.1	0.49	0.49	Truck Dr.	4.74	0.1	0.47	0.47	1.36
Animal Carcasses	Lab.Tech.	4.12	0.75	3.09	3.09						Lab.Tech.	4.12	0.5	2.06	2.06						5.15
Food Waste (Grindable)	Fd.Srv.Wk	3.42	27.0	92.34	92.34																92.34
					$4606.80					$30.98					$269.20					$37.90	$4944.88

SYSTEM 8

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	10.0	$ 57.20	$ 57.20						Equip. Op.II	$4.94	0.3	$ 1.48	$ 1.48	Truck Dr.	$4.74	0.05	$0.24	$0.24	$ 58.92
Pathological and Surgical	Lab.Tech.	4.12	1.0	4.12	5.98	Custodian	$3.71	0.5	$ 1.86	$ 1.86	Lab.Tech.	4.12	3.0	12.36	12.36						20.20
	Custodian	3.71	0.5	1.86																	
Soiled Linen	Nurse	5.72	94.0	537.68	851.64						Equip. Op.II	4.94	16.8	82.99	82.99						934.63
	Attendant	3.34	94.0	313.96																	
Rubbish	Custodian	3.71	525.0	1947.75	1947.75						Equip. Op.II	4.94	6.0	29.64	29.64	Truck Dr.	4.74	0.8	3.79	3.79	1981.18
Reusable Patient Items	Nurse	5.72	16.0	91.52	311.96																311.96
	Attendant	3.34	66.0	220.44																	
Non-Combustible	Custodian	3.71	10.0	37.10	37.10						Equip. Op.II	4.94	0.3	1.48	1.48	Truck Dr.	4.74	0.05	0.24	0.24	38.82
Garbage (Non-Grindable)	Attendant	3.34	3.0	10.02	10.02						Equip. Op.II	4.94	0.6	2.96	2.96	Truck Dr.	4.74	0.05	0.24	0.24	13.22
Food Service Items	Nurse	5.72	142.0	812.24	1286.52	Elev.Op.	3.71	7.25	26.90	26.90	Trans Dr.	4.03	3.5	14.11	89.78						1403.20
	Attendant	3.34	142.0	474.28							Fd.Srv.Wk	3.42	18.0	61.56							
											Inst. Lab.	4.03	3.5	14.11							
Radiological	Lab.Tech.	4.12	0.5	2.06	2.80	Elev.Op.	3.71	0.3	1.11	2.22	Custodian	3.71	1.0	3.71	3.71						8.73
	Custodian	3.71	0.2	0.74		Custodian	3.71	0.3	1.11												
Ash & Residue	Inst. Lab.	4.03	0.1	0.40	0.40						Equip. Op.II	4.94	0.1	0.49	0.49	Truck Dr.	4.74	0.05	0.24	0.24	1.13
Animal Carcasses	Lab.Tech.	4.12	0.75	3.09	3.09						Lab.Tech.	4.12	0.5	2.06	2.06						4.15
Food Waste (Grindable)	Fd.Srv.Wk	3.42	27.0	92.34	92.34																92.34
					$4606.80					$30.98					$226.95					$4.75	$4869.48

ESTIMATED DAILY LABOR COSTS OF HOSPITAL SOLID WASTE SYSTEMS

SYSTEM 9

LAC-USC MEDICAL CENTER

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	10.0	$ 57.20	$ 57.20						Equip. Op.II	$4.94	0.3	$ 1.48	$ 1.48	Truck Dr.	$4.74	0.1	$ 0.47	$ 0.47	$ 59.15
Pathological and Surgical	Lab. Tech.	4.12	1.0	4.12	5.98	Custodian	$3.71	0.5	$ 1.86	$ 1.86	Lab. Tech.	4.12	3.0	12.36	12.36						20.20
	Custodian	3.71	0.5	1.86																	
Soiled Linen	Nurse	5.72	94.0	537.68	851.64						Equip. Op.II	4.94	16.8	82.99	82.99						934.63
	Attendant	3.34	94.0	313.96																	
Rubbish	Custodian	3.71	525.0	1947.75	1947.75						Equip. Op.II	4.94	6.0	29.64	29.64	Truck Dr.	4.74	6.6	31.28	31.28	2008.67
Reusable Patient Items	Nurse	5.72	16.0	91.52	311.96																311.96
	Attendant	3.34	66.0	220.44																	
Non-Combustible	Custodian	3.71	10.0	37.10	37.10						Equip. Op.II	4.94	0.3	1.48	1.48	Truck Dr.	4.74	0.6	2.84	2.84	41.42
Garbage (Non-Grindable)	Attendant	3.34	3.0	10.02	10.02						Equip. Op.II	4.94	0.6	2.96	2.96	Truck Dr.	4.74	0.6	2.84	2.84	15.82
Food Service Items	Nurse	5.72	142.0	812.24	1286.52	Elev. Op.	3.71	7.25	26.90	26.90	Tram Dr.	4.03	3.5	14.11	89.78						1403.20
	Attendant	3.34	142.0	474.28							Fd.Srv.Wk	3.42	18.0	61.56							
											Inst. Lab.	4.03	3.5	14.11							
Radiological	Lab. Tech.	4.12	0.5	2.06	2.80	Elev.Op.	3.71	0.3	1.11	2.22	Custodian	3.71	1.0	3.71	3.71						8.73
	Custodian	3.71	0.2	0.74		Custodian	3.71	0.3	1.11												
Ash & Residue	Inst. Lab.	4.03	0.1	0.40	0.40						Equip. Op.II	4.94	0.1	0.49	0.49	Truck Dr.	4.74	0.1	0.47	0.47	1.36
Animal Carcasses	Lab. Tech.	4.12	0.75	3.09	3.09						Lab. Tech.	4.12	0.5	2.06	2.06						5.15
Food Waste (Grindable)	Fd.Srv.Wk	3.42	27.0	92.34	92.34																92.34
					$4406.80					$30.98					$226.95					$37.90	$4982.63

Reproduced from best available copy.

NUMERICAL RATING OF HOSPITAL SOLID WASTE SYSTEMS

LONG BEACH GENERAL HOSPITAL

SYSTEM 1

Type of Waste		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	40	0	50		20	0	130		50		20		70	0	50	3	10	5	20	8	80	0	[illegible]	0	[illegible]	0	[illegible]	8	[illegible]
	Safety	10	40	0	50		10	10	100		45		10		55	0	45	1	5	2	10	3	60	0	[illegible]	0	[illegible]	0	[illegible]	13	[illegible]
	Security	0	30	0	5		25	0	60		5		25		30	0	5	0	25	0	10	0	40	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	0	5	0	5		5	0	15		5		5		10	0	5	2	5	1	5	3	15	0	[illegible]	0	[illegible]	0	[illegible]	3	[illegible]
Surgical, Patho-logical & Animals	Sanitation	0	20	0	15	20	15	20	50		20		15		35	0	10		10	0	40	0	60		[illegible]		[illegible]		[illegible]	20	[illegible]
	Safety	0	5	0	10	2	5	2	20		5		10		15	5	15		10	0	5	5	30		[illegible]		[illegible]		[illegible]	7	[illegible]
	Security	0	5	0	5	20	35	20	45		5		35		40	0	5		20	0	5	0	30		[illegible]		[illegible]		[illegible]	20	[illegible]
	Esthetics	2	10	2	5	5	15	9	30		5		15		20	2	5		15	2	10	4	30		[illegible]		[illegible]		[illegible]	13	[illegible]
Soiled Linen	Sanitation	30	40	35	50		30	65	120		[illegible]		[illegible]		130	0	30	7	30		40	7	100	7	[illegible]	0	[illegible]	7	[illegible]	79	[illegible]
	Safety	2	5	2	5		5	4	15		5		5		10	0	10	1	5		15	1	30	2	[illegible]	0	[illegible]	2	[illegible]	7	[illegible]
	Security	0	5	0	5		5	0	15		5		15		20	0	15	0	20		5	0	40	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	15	20	10	15		10	25	45		10		10		20	0	5	2	5		5	2	15	0	[illegible]	5	[illegible]	5	[illegible]	32	[illegible]
Rubbish	Sanitation	2	5	0	10		10	2	25		20		15		35	0	10	2	10	4	15	6	35	0	[illegible]	0	[illegible]	0	[illegible]	8	[illegible]
	Safety	5	15	5	20		25	10	60		20		45		65	0	15	6	25	6	25	12	65	0	[illegible]	0	[illegible]	0	[illegible]	22	[illegible]
	Security	2	5	0	5		20	2	30		5		15		20	0	5	0	15	0	10	0	30	0	[illegible]	0	[illegible]	0	[illegible]	2	[illegible]
	Esthetics	10	15	5	15		10	15	40		10		10		20	0	5	1	5	1	5	2	15	0	[illegible]	0	[illegible]	0	[illegible]	17	[illegible]
Reusable Patient Items	Sanitation		15	10	20	5	25	15	60		15		15		30		20		10		15		45		[illegible]		[illegible]		[illegible]	15	[illegible]
	Safety		15	10	20	2	5	12	40		15		5		20		15		5		15		35		[illegible]		[illegible]		[illegible]	12	[illegible]
	Security		15	0	5	3	15	3	35		5		15		20		10		15		15		40		[illegible]		[illegible]		[illegible]	3	[illegible]
	Esthetics		5	2	5	2	5	4	15		5		5		10		5		5		5		15		[illegible]		[illegible]		[illegible]	4	[illegible]
Non-Combustible	Sanitation	2	5	0	10		15	2	30		15		5		20	0	5	1	5	1	5	2	15	2	[illegible]	30	[illegible]	32	[illegible]	36	[illegible]
	Safety	5	20	5	15		20	10	55		15		20		35	0	10	2	10	2	10	4	30	0	[illegible]	13	[illegible]	13	[illegible]	27	[illegible]
	Security	5	10	0	5		15	5	30		5		10		15	0	5	0	10	0	5	0	20	0	[illegible]	15	[illegible]	15	[illegible]	20	[illegible]
	Esthetics	5	10	2	5		5	7	20		5		5		10	0	5	1	5	1	5	2	15	2	[illegible]	2	[illegible]	4	[illegible]	13	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	2	5		15	4	25		5		15		20	0	5	1	5	4	15	5	25	0	[illegible]	0	[illegible]	0	[illegible]	9	[illegible]
	Safety	2	5	2	5		5	4	15		5		5		10	0	5	1	5	1	5	2	15	0	[illegible]	0	[illegible]	0	[illegible]	6	[illegible]
	Security	0	5	0	5		5	0	15		5		5		10	0	5	0	5	0	5	0	15	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	4	15	1	5		10	5	30		5		10		15	0	5	2	10	1	5	3	20	0	[illegible]	0	[illegible]	0	[illegible]	8	[illegible]
Food Service Items	Sanitation	2	5	2	5	2	10	6	20		5		10		15		5		5		15		25		[illegible]		[illegible]		[illegible]	6	[illegible]
	Safety	5	10	5	10	0	10	10	30		5		10		15		5		5		10		20		[illegible]		[illegible]		[illegible]	10	[illegible]
	Security	0	5	0	5	0	5	0	15		5		5		10		5		5		5		15		[illegible]		[illegible]		15	0	[illegible]
	Esthetics	2	5	2	5	2	5	6	15		5		5		10		5		5		5		15		[illegible]		[illegible]		10	6	[illegible]
Total	Sanitation	38	135	49	185	27	155	114	475		210		165		375	0	135	14	85	14	165	28	[illegible]	9	[illegible]	30	[illegible]	39	[illegible]	181	[illegible]
	Safety	29	115	29	135	4	85	62	335		115		110		225	5	120	11	70	11	95	27	[illegible]	2	[illegible]	13	[illegible]	15	[illegible]	104	[illegible]
	Security	7	80	0	40	23	125	30	245		40		125		165	0	55	0	115	0	60	0	[illegible]	0	[illegible]	15	[illegible]	15	[illegible]	45	[illegible]
	Esthetics	38	85	24	60	9	65	71	210		50		65		115	2	40	8	55	6	45	16	[illegible]	2	[illegible]	7	[illegible]	9	[illegible]	96	[illegible]
TOTAL		112	415	102	420	63	430	277	1265		415		465		880	7	350	33	325	31	365	71	1040	13	275	65	840	78	1115	426	4300

SYSTEM 2

Type of Waste		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	40	0	50		20	0	130		50		20		70	0	50	3	10	10	20	13	80		[illegible]		[illegible]		[illegible]	13	[illegible]
	Safety	10	40	0	50		10	10	100		45		10		55	0	45	1	5	5	10	6	60		[illegible]		[illegible]		[illegible]	16	[illegible]
	Security	0	30	0	5		25	0	60		5		25		30	0	5	0	25	0	10	0	40		[illegible]		[illegible]		[illegible]	0	[illegible]
	Esthetics	0	5	0	5		5	0	15		5		5		10	0	5	2	5	5	5	7	15		[illegible]		[illegible]		[illegible]	7	[illegible]
Surgical, Patho-logical & Animals	Sanitation	0	20	0	15	20	15	20	50		20		15		35	0	10		10	0	40	0	60		[illegible]		[illegible]		[illegible]	20	[illegible]
	Safety	0	5	0	10	2	5	2	20		5		10		15	5	15		10	0	5	5	30		[illegible]		[illegible]		[illegible]	7	[illegible]
	Security	0	5	0	5	20	35	20	45		5		35		40	0	5		20	0	5	0	30		[illegible]		[illegible]		[illegible]	20	[illegible]
	Esthetics	2	10	2	5	5	15	9	30		5		15		20	2	5		15	2	10	4	30		[illegible]		[illegible]		[illegible]	13	[illegible]
Soiled Linen	Sanitation	30	40	35	50		30	65	120		[illegible]		[illegible]		130	0	30	7	30		40	7	100	7	[illegible]	0	[illegible]	7	[illegible]	79	[illegible]
	Safety	2	5	2	5		5	4	15		5		5		10	0	10	1	5		15	1	30	2	[illegible]	0	[illegible]	2	[illegible]	7	[illegible]
	Security	0	5	0	5		5	0	15		5		15		20	0	15	0	20		5	0	40	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	15	20	10	15		10	25	45		10		10		20	0	5	2	5		5	2	15	0	[illegible]	5	[illegible]	5	[illegible]	32	[illegible]
Rubbish	Sanitation	2	5	0	10		10	2	25		20		15		35	0	10	2	10	8	15	10	35		[illegible]		[illegible]		[illegible]	12	[illegible]
	Safety	5	15	5	20		25	10	60		20		45		65	0	15	6	25	12	25	18	65		[illegible]		[illegible]		[illegible]	28	[illegible]
	Security	2	5	0	5		20	2	30		5		15		20	0	5	0	15	0	10	0	30		[illegible]		[illegible]		[illegible]	2	[illegible]
	Esthetics	10	15	5	15		10	15	40		10		10		20	0	5	1	5	5	5	6	15		[illegible]		[illegible]		[illegible]	21	[illegible]
Reusable Patient Items	Sanitation		15	10	20	5	25	15	60		15		15		30		20		10		15		45		[illegible]		[illegible]		[illegible]	15	[illegible]
	Safety		15	10	20	2	5	12	40		15		5		20		15		5		15		35		[illegible]		[illegible]		[illegible]	12	[illegible]
	Security		15	0	5	3	15	3	35		5		15		20		10		15		15		40		[illegible]		[illegible]		[illegible]	3	[illegible]
	Esthetics		5	2	5	2	5	4	15		5		5		10		5		5		5		15		[illegible]		[illegible]		[illegible]	4	[illegible]
Non-Combustible	Sanitation	2	5	0	10		15	2	30		15		5		20	0	5	1	5	3	5	4	15	2	[illegible]	15	[illegible]	17	[illegible]	23	[illegible]
	Safety	5	20	5	15		20	10	55		15		20		35	0	10	2	10	5	10	7	30	2	[illegible]	6	[illegible]	8	[illegible]	25	[illegible]
	Security	5	10	0	5		15	5	30		5		10		15	0	5	0	10	0	5	0	20	0	[illegible]	0	[illegible]	0	[illegible]	5	[illegible]
	Esthetics	5	10	2	5		5	7	20		5		5		10	0	5	1	5	5	5	6	15	1	[illegible]	1	[illegible]	2	[illegible]	15	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	2	5		15	4	25		5		15		20	0	5	1	5	8	15	9	25		[illegible]		[illegible]		[illegible]	13	[illegible]
	Safety	2	5	2	5		5	4	15		5		5		10	0	5	1	5	3	5	4	15		[illegible]		[illegible]		[illegible]	8	[illegible]
	Security	0	5	0	5		5	0	15		5		5		10	0	5	0	5	0	5	0	15		[illegible]		[illegible]		[illegible]	0	[illegible]
	Esthetics	4	15	1	5		10	5	30		5		10		15	0	5	2	10	5	5	7	20		[illegible]		[illegible]		[illegible]	12	[illegible]
Food Service Items	Sanitation	2	5	2	5	2	10	6	20		5		10		15		5		5		15		25		[illegible]		[illegible]		[illegible]	6	[illegible]
	Safety	5	10	5	10	0	10	10	30		5		10		15		5		5		10		20		[illegible]		[illegible]		[illegible]	10	[illegible]
	Security	0	5	0	5	0	5	0	15		5		5		10		5		5		5		15		[illegible]		[illegible]		15	0	[illegible]
	Esthetics	2	5	2	5	2	5	6	15		5		5		10		5		5		5		15		[illegible]		[illegible]		10	6	[illegible]
Total	Sanitation	38	135	49	185	27	155	114	475		210		165		375	0	135	14	85	29	165	43	[illegible]	9	[illegible]	15	[illegible]	24	[illegible]	181	[illegible]
	Safety	29	115	29	135	4	85	62	335		115		110		225	5	120	11	70	25	95	41	[illegible]	4	[illegible]	6	[illegible]	10	[illegible]	113	[illegible]
	Security	7	80	0	40	23	125	30	245		40		125		165	0	55	0	115	0	60	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	30	[illegible]
	Esthetics	38	85	24	60	9	65	71	210		50		65		115	2	40	8	55	22	45	32	[illegible]	1	[illegible]	6	[illegible]	7	[illegible]	110	[illegible]
TOTAL		112	415	102	420	63	430	277	1265		415		465		880	7	350	33	325	76	385	116	1040	14	275	27	840	41	1115	434	4300

Reproduced from best available copy.

NUMERICAL RATING OF HOSPITAL SOLID WASTE SYSTEMS

LONG BEACH GENERAL HOSPITAL

SYSTEMS 3

Type of Waste		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	40	0	50		20	0	110		50		20		70	0	30	3	10	5	20	8	60	0	[illegible]	0	[illegible]	0	[illegible]	8	[illegible]
	Safety	10	40	0	50		10	10	100		45		10		55	0	45	1	5	2	10	3	60	0	[illegible]	20	[illegible]	20	[illegible]	33	[illegible]
	Security	0	30	0	5		25	0	60		5		25		30	0	5	0	25	0	10	0	40	0	[illegible]	60	[illegible]	60	[illegible]	60	[illegible]
	Esthetics	0	5	0	5		5	0	15		5		5		10	0	5	2	5	1	5	3	15	0	[illegible]	0	[illegible]	0	[illegible]	3	[illegible]
Surgical, Pathological & Animals	Sanitation	0	20	0	35	20	35	20	90		20		35		55	0	10		15	0	40	0	65		[illegible]		[illegible]		[illegible]	20	[illegible]
	Safety	0	5	0	10	2	5	2	20		5		10		15	5	15		10	0	5	5	30		[illegible]		[illegible]		[illegible]	7	[illegible]
	Security	0	5	0	5	20	35	20	45		5		35		40	0	5		20	0	5	0	30		[illegible]		[illegible]		[illegible]	20	[illegible]
	Esthetics	2	10	2	5	5	15	9	30		5		15		20	2	5		15	2	10	4	30		[illegible]		[illegible]		[illegible]	13	[illegible]
Soiled Linen	Sanitation	30	40	35	50		30	65	120		80		50		130	0	30	7	30		40	7	100	7	[illegible]	0	[illegible]	7	[illegible]	79	[illegible]
	Safety	2	5	2	5		5	4	15		5		5		10	0	10	1	5		15	1	30	2	[illegible]	0	[illegible]	2	[illegible]	7	[illegible]
	Security	0	5	0	5		5	0	15		5		15		20	0	15	0	20		5	0	40	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	15	20	10	15		10	25	45		10		10		20	0	5	2	5		5	2	15	0	[illegible]	5	[illegible]	5	[illegible]	32	[illegible]
Rubbish	Sanitation	2	5	0	10		10	2	25		20		15		35	0	10	2	10	4	15	6	35	0	[illegible]	0	[illegible]	0	[illegible]	8	[illegible]
	Safety	5	15	5	20		25	10	60		20		45		65	0	15	6	25	6	25	12	65	0	[illegible]	0	[illegible]	0	[illegible]	22	[illegible]
	Security	2	5	0	5		20	2	30		5		15		20	0	5	0	15	0	10	0	30	0	15	30	[illegible]	30	[illegible]	32	[illegible]
	Esthetics	10	15	5	15		10	15	40		10		10		20	0	5	1	5	1	5	2	15	0	[illegible]	0	[illegible]	0	[illegible]	17	[illegible]
Reusable Patient Items	Sanitation		15	10	20	5	25	15	60		15		15		30		20		10		15		45		10		15		25	15	[illegible]
	Safety		15	10	20	2	5	12	40		15		5		20		15		5		15		35		10		15		25	12	[illegible]
	Security		15	0	5	3	15	3	35		5		15		20		10		15		15		40		10		15		[illegible]	3	[illegible]
	Esthetics		5	2	5	2	5	4	15		5		5		10		5		5		5		15		5		5		[illegible]	4	[illegible]
Non-Combustible	Sanitation	2	5	0	10		10	2	25		15		5		20	0	5	1	5	1	5	2	15	2	[illegible]	30	[illegible]	32	[illegible]	36	[illegible]
	Safety	5	20	5	15		20	10	55		15		20		35	0	10	2	10	2	10	4	30	1	[illegible]	6	[illegible]	7	[illegible]	21	[illegible]
	Security	5	10	0	5		15	5	30		5		10		15	0	5	0	10	0	5	0	20	0	[illegible]	15	[illegible]	15	[illegible]	20	[illegible]
	Esthetics	5	10	2	5		5	7	20		5		5		10	0	5	1	5	1	5	2	15	2	[illegible]	2	[illegible]	4	[illegible]	13	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	2	5		15	4	25		5		15		20	0	5	1	5	4	15	5	25	0	[illegible]	0	[illegible]	[illegible]	[illegible]	9	[illegible]
	Safety	2	5	2	5		5	4	15		5		5		10	0	5	1	5	1	5	2	15	0	[illegible]	0	[illegible]	0	[illegible]	6	[illegible]
	Security	0	5	0	5		5	0	15		5		5		10	0	5	0	5	0	5	0	15	0	[illegible]	5	[illegible]	5	[illegible]	5	[illegible]
	Esthetics	4	15	1	5		10	5	30		5		10		15	0	5	2	10	1	5	3	20	4	15	0	[illegible]	4	[illegible]	12	[illegible]
Food Service Items	Sanitation	2	5	2	5	2	10	6	20		5		10		15		5		5		15		25		5		[illegible]		[illegible]	6	[illegible]
	Safety	5	10	5	10	0	10	10	30		5		10		15		5		5		10		20		5		10		15	10	[illegible]
	Security	0	5	0	5	0	5	0	15		5		5		10		5		5		5		15		5		5		10	0	[illegible]
	Esthetics	2	5	2	5	2	5	6	15		5		5		10		5		5		5		15		5		5		10	6	[illegible]
Total	Sanitation	38	135	49	185	27	155	114	475		210		165		375	0	135	14	85	14	165	28	385	9	[illegible]	30	[illegible]	39	[illegible]	181	[illegible]
	Safety	29	115	29	135	4	85	62	335		115		110		225	5	120	11	70	11	95	27	285	3	[illegible]	26	[illegible]	29	[illegible]	118	[illegible]
	Security	7	80	0	40	23	125	30	245		40		125		165	0	55	0	115	0	60	0	230	0	[illegible]	110	[illegible]	110	[illegible]	140	[illegible]
	Esthetics	38	85	24	60	9	65	71	210		50		65		115	2	40	8	55	6	45	16	140	6	[illegible]	7	[illegible]	13	[illegible]	100	[illegible]
TOTAL		112	415	102	420	63	430	277	1265		415		465		880	7	350	33	325	31	365	71	1040	18	275	173	840	191	1115	539	4300

SYSTEM 4

Type of Waste		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def Value	Max. Value	Def. Value	Max Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	40	0	50		20	10	110		50		20		70	0	30	3	10	5	20	8	60	5	20	40	[illegible]	45	[illegible]	53	[illegible]
	Safety	10	40	0	50		10	10	100		45		10		55	0	45	1	5	2	10	3	60	2	[illegible]	38	[illegible]	40	[illegible]	53	[illegible]
	Security	0	30	0	5		25	0	60		5		25		30	0	5	0	25	0	10	0	40	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	0	5	0	5		5	0	15		5		5		10	0	5	2	5	1	5	3	15	1	5	5	[illegible]	6	[illegible]	9	[illegible]
Surgical, Pathological & Animals	Sanitation	0	20	0	35	20	35	20	90		20		35		55	0	10		15	0	40	0	65		[illegible]		[illegible]		[illegible]	20	[illegible]
	Safety	0	5	0	10	2	5	2	20		5		10		15	5	15		10	0	5	5	30		[illegible]		[illegible]		[illegible]	7	[illegible]
	Security	0	5	0	5	20	35	20	45		5		35		40	0	5		20	0	5	0	30		[illegible]		[illegible]		[illegible]	20	[illegible]
	Esthetics	2	10	2	5	5	15	9	30		5		15		20	2	5		15	2	10	4	30		[illegible]		[illegible]		[illegible]	13	[illegible]
Soiled Linen	Sanitation	30	40	35	50		30	65	120		80		50		130	0	30	7	30		40	7	100	7	[illegible]	0	[illegible]	7	[illegible]	79	[illegible]
	Safety	2	5	2	5		5	4	15		5		5		10	0	10	1	5		15	1	30	2	[illegible]	0	[illegible]	2	[illegible]	7	[illegible]
	Security	0	5	0	5		5	0	15		5		15		20	0	15	0	20		5	0	40	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	15	20	10	15		10	25	45		10		10		20	0	5	2	5		5	2	15	0	[illegible]	5	[illegible]	5	[illegible]	32	[illegible]
Rubbish	Sanitation	2	5	0	10		10	2	25		20		15		35	0	10	2	10	4	15	6	35	2	10	28	[illegible]	30	[illegible]	38	[illegible]
	Safety	5	15	5	20		25	10	60		20		45		65	0	15	6	25	6	25	12	65	2	[illegible]	12	[illegible]	14	[illegible]	36	[illegible]
	Security	2	5	0	5		20	2	30		5		15		20	0	5	0	15	0	10	0	30	0	15	0	[illegible]	0	[illegible]	2	[illegible]
	Esthetics	10	15	5	15		10	15	40		10		10		20	0	5	1	5	1	5	2	15	2	10	4	[illegible]	6	[illegible]	23	[illegible]
Reusable Patient Items	Sanitation		15	10	20	5	25	15	60		15		15		30		20		10		15		45		10		15		25	15	[illegible]
	Safety		15	10	20	2	5	12	40		15		5		20		15		5		15		35		10		15		25	12	[illegible]
	Security		15	0	5	3	15	3	35		5		15		20		10		15		15		40		10		[illegible]		[illegible]	3	[illegible]
	Esthetics		5	2	5	2	5	4	15		5		5		10		5		5		5		15		5		5		[illegible]	4	[illegible]
Non-Combustible	Sanitation	2	5	0	10		10	2	25		15		5		20	0	5	1	5	1	5	2	15	2	[illegible]	30	[illegible]	32	[illegible]	36	[illegible]
	Safety	5	20	5	15		20	10	55		15		20		35	0	10	2	10	2	10	4	30	0	5	13	[illegible]	13	[illegible]	27	[illegible]
	Security	5	10	0	5		15	5	30		5		10		15	0	5	0	10	0	5	0	20	0	5	15	15	15	20	20	[illegible]
	Esthetics	5	10	2	5		5	7	20		5		5		10	0	5	1	5	1	5	2	15	2	5	2	[illegible]	4	[illegible]	13	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	2	5		15	4	25		5		15		20	0	5	1	5	4	15	5	25	2	10	8	15	10	25	19	[illegible]
	Safety	2	5	2	5		5	4	15		5		5		10	0	5	1	5	1	5	2	15	1	5	5	[illegible]	6	15	12	[illegible]
	Security	0	5	0	5		5	0	15		5		5		10	0	5	0	5	0	5	0	15	0	5	0	5	0	[illegible]	0	[illegible]
	Esthetics	4	15	1	5		10	5	30		5		10		15	0	5	2	10	1	5	3	20	4	15	4	[illegible]	8	[illegible]	16	[illegible]
Food Service Items	Sanitation	2	5	2	5	2	10	6	20		5		10		15		5		5		15		25		5		[illegible]		[illegible]	6	[illegible]
	Safety	5	10	5	10	0	10	10	30		5		10		15		5		5		10		20		5		10		15	10	[illegible]
	Security	0	5	0	5	0	5	0	15		5		5		10		5		5		5		15		5		5		10	0	[illegible]
	Esthetics	2	5	2	5	2	5	6	15		5		5		10		5		5		5		15		5		5		10	6	[illegible]
Total	Sanitation	38	135	49	185	27	155	114	475		210		165		375	0	135	14	85	14	165	28	385	18	[illegible]	106	[illegible]	124	[illegible]	266	[illegible]
	Safety	29	115	29	135	4	85	62	335		115		110		225	5	120	11	70	11	95	27	285	7	55	68	[illegible]	75	[illegible]	164	[illegible]
	Security	7	80	0	40	23	125	30	245		40		125		165	0	55	0	115	0	60	0	230	0	[illegible]	15	[illegible]	15	[illegible]	45	[illegible]
	Esthetics	38	85	24	60	9	65	71	210		50		65		115	2	40	8	55	6	45	16	140	9	[illegible]	20	[illegible]	29	[illegible]	116	[illegible]
TOTAL		112	415	102	420	63	430	277	1265		415		465		880	7	350	33	325	31	365	71	1040	34	275	209	840	243	1115	591	4300

ESTIMATED DAILY LABOR COSTS OF HOSPITAL SOLID WASTE SYSTEMS

LONG BEACH GENERAL HOSPITAL

SYSTEMS 1, 4 & 5

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	1.0	$ 5.72	$ 5.72						Equip. Op.I	$5.28	0.1	$ 0.53	$ 0.53						$ 6.25
Pathological and Surgical	Lab.Tech.	4.12	0.1	0.41	0.41						Lab.Tech.	4.12	0.4	1.65	1.65						2.06
Soiled Linen	Nurse Attendant	5.72 3.34	3.0 52.0	17.16 173.68	190.84						Equip. Op.I	5.28	6.5	34.32	34.32	Truck Dr.	$4.74	1.5	$7.11	$ 7.11	232.27
Rubbish	Custodian	3.71	11.0	40.81	40.81						Equip. Op.I	5.28	1.0	5.28	5.28						46.09
Reusable Patient Items	Nurse	5.72	2.5	14.30	14.30																14.30
Non-Combustible	Custodian	3.71	1.5	5.57	5.57						Equip. Op.I	5.28	0.1	0.53	0.53	Truck Dr.	4.74	1.0	4.74	4.74	10.84
Garbage (Non-Grindable)	Fd.Srv.Wk	3.42	4.0	13.68	13.68						Equip. Op.I	5.28	0.3	1.58	1.58						15.26
Food Service Items	Fd.Srv.Wk Attendant	3.42 3.34	16.5 31.5	56.43 105.21	161.64																161.64
Radiological																					
Ash & Residue																					
Animal Carcasses																					
Food Waste(Grindable)	Fd.Srv.Wk	3.42	16.5	56.43	56.43																56.43
					$489.40										$43.89					$11.85	$545.14

SYSTEM 2

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	1.0	$ 5.72	$ 5.72						Inc. Op.	$5.78	0.1	$ 0.58	$ 0.58						$ 6.30
Pathological and Surgical	Lab Tech.	4.12	0.1	0.41	0.41						Lab Tech.	4.12	0.4	1.65	1.65						2.06
Soiled Linen	Nurse Attendant	5.72 3.34	3.0 52.0	17.16 173.68	190.84						Inc. Op.	5.78	1.0	5.78	5.78						196.62
Rubbish	Custodian	3.71	11.0	40.81	40.81						Inc. Op.	5.78	3.8	21.96	21.96						62.77
Reusable Patient Items	Nurse	5.72	2.5	14.30	14.30																14.30
Non-Combustible	Custodian	3.71	1.5	5.57	5.57						Inc. Op.	5.78	0.7	4.05	4.05	Truck Dr.	$4.74	0.5	$2.37	$2.37	11.99
Garbage (Non-Grindable)	Fd.Srv.Wk	3.42	4.0	13.68	13.68						Inc. Op.	5.78	1.4	8.09	8.09						21.77
Food Service Items	Fd.Srv.Wk Attendant	3.42 3.34	16.5 31.5	56.43 105.21	161.64																161.64
Radiological																					
Ash & Residue											Inc. Op.	5.78	1.0	5.78	5.78	Truck Dr.	4.74	0.5	2.37	2.37	8.15
Animal Carcasses																					
Food Waste(Grindable)	Fd.Srv.Wk	3.42	16.5	56.43	56.43																56.43
					$489.40										$47.89					$4.74	$542.03

ESTIMATED DAILY LABOR COSTS OF HOSPITAL SOLID WASTE SYSTEMS

SYSTEMS 3, 6 & 7

LONG BEACH GENERAL HOSPITAL

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	1.0	$ 5.72	$ 5.72						Equip. Op.I	$5.28	0.1	$ 0.53	$ 0.53	Truck Dr.	$4.74	0.1	$ 0.47	$ 0.47	$ 6.72
Pathological and Surgical	Lab Tech.	4.12	0.1	0.41	0.41						Lab Tech.	4.12	0.4	1.65	1.65						2.06
Soiled Linen	Nurse Attendant	5.72 3.34	3.0 52.0	17.16 173.68	190.84						Equip. Op.I	5.28	6.5	34.32	34.32	Truck Dr.	4.74	1.5	7.11	7.11	232.27
Rubbish	Custodian	3.71	11.0	40.81	40.81						Equip. Op.I	5.28	1.0	5.28	5.28	Truck Dr.	4.74	2.7	12.80	12.80	58.89
Reusable Patient Items	Nurse	5.72	2.5	14.30	14.30																14.30
Non-Combustible	Custodian	3.71	1.5	5.57	5.57						Equip. Op.I	5.28	0.1	0.53	0.53	Truck Dr.	4.74	0.4	1.90	1.90	8.00
Garbage (Non-Grindable)	Fd.Srv.Wk	3.42	4.0	13.68	13.68						Equip. Op.I	5.28	0.3	1.58	1.58	Truck Dr.	4.74	0.8	3.79	3.79	19.05
Food Service Items	Fd.Srv.Wk Attendant	3.42 3.34	16.5 31.5	56.43 105.21	161.64																161.64
Radiological																					
Ash & Residue																					
Animal Carcasses																					
Food Waste (Grindable)	Fd.Srv.Wk	3.42	16.5	56.43	56.43																56.43
					$489.40										$43.89					$26.07	$559.36

SYSTEM 8

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	1.0	$ 5.72	$ 5.72						Equip. Op.II	$4.94	0.1	$ 0.49	$ 0.49	Truck Dr.	$4.74	0.05	$0.24	$ 0.24	$ 6.45
Pathological and Surgical	Lab Tech.	4.12	0.1	0.41	0.41						Lab Tech.	4.12	0.4	1.65	1.65						2.06
Soiled Linen	Nurse Attendant	5.72 3.34	3.0 52.0	17.16 173.68	190.84						Equip. Op.II	4.94	3.2	15.81	15.81	Truck Dr.	4.74	1.5	7.11	7.11	213.76
Rubbish	Custodian	3.71	11.0	40.81	40.81						Equip. Op.II	4.94	0.5	2.47	2.47	Truck Dr.	4.74	0.85	4.03	4.03	47.21
Reusable Patient Items	Nurse	5.72	2.5	14.30	14.30																14.30
Non-Combustible	Custodian	3.71	1.5	5.57	5.57						Equip. Op.II	4.94	0.1	0.49	0.49	Truck Dr.	4.74	0.05	0.24	0.24	6.30
Garbage (Non-Grindable)	Fd.Srv.Wk	3.42	4.0	13.68	13.68						Equip. Op.II	4.94	0.1	0.49	0.49	Truck Dr.	4.74	0.05	0.24	0.24	14.41
Food Service Items	Fd.Srv.Wk Attendant	3.42 3.34	16.5 31.5	56.43 105.21	161.64																161.64
Radiological																					
Ash & Residue																					
Animal Carcasses																					
Food Waste (Grindable)	Fd.Srv.Wk	3.42	16.5	56.43	56.43																56.43
					$489.40										$21.40					$11.86	$522.46

ESTIMATED DAILY LABOR COSTS OF HOSPITAL SOLID WASTE SYSTEMS

SYSTEM 9

LONG BEACH GENERAL HOSPITAL

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	1.0	$ 5.72	$ 5.72						Equip. Op.II	$4.94	0.1	$ 0.49	$ 0.49	Truck Dr.	$4.74	0.1	$ 0.47	$ 0.47	$ 6.68
Pathological and Surgical	Lab.Tech	4.12	0.1	0.41	0.41						Lab.Tech	4.12	0.4	1.65	1.65						2.06
Soiled Linen	Nurse Attendant	5.72 3.34	3.0 52.0	17.16 173.68	190.84						Equip. Op.II	4.94	3.2	15.81	15.81	Truck Dr.	4.74	1.5	7.11	7.11	213.76
Rubbish	Custodian	3.71	11.0	40.81	40.81						Equip. Op.II	4.94	0.5	2.47	2.47	Truck Dr.	4.74	2.7	12.80	12.80	56.08
Reusable Patient Items	Nurse	5.72	2.5	14.30	14.30																14.30
Non-Combustible	Custodian	3.71	1.5	5.57	[illegible].57						Equip. Op.II	4.94	0.1	0.49	0.49	Truck Dr.	4.74	0.4	1.90	1.90	7.96
Garbage (Non-Grindable)	Fd.Srv.Wk	3.42	4.0	13.68	13.68						Equip. Op.II	4.94	0.1	0.49	0.49	Truck Dr.	4.74	0.8	3.79	3.79	17.96
Food Service Items	Fd.Srv.Wk Attendant	3.42 3.34	16.5 31.5	56.43 105.21	161.64																161.64
Radiological																					
Ash & Residue																					
Animal Carcasses																					
Food Waste (Grindable)	Fd.Srv.Wk	3.42	16.5	56.43	56.43																56.43
					$489.40										$21.40					$26.07	$536.87

Reproduced from
best available copy.

NUMERICAL RATING OF HOSPITAL SOLID WASTE SYSTEMS

HARBOR GENERAL HOSPITAL - UNIT I

SYSTEM 1

Type of Waste		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal				Vertical Transfer		Intermediate Storage, Processing, Disposal				Internal Transfer		Central Storage		Central Processing or Disposal				External Transfer		Final Processing and/or Disposal					
		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value Total	Max. Value Total	Def Value	Max. Value	Def. Value	Max Value	Def Value Total	Max. Value Total	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value Total	Max. Value Total	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
Sharps, Needles, Etc.	Sanitation	0	40	0	60		20	0	120	12	50		20	12	70	0	50	3	10	5	[illegible]	8	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	20	[illegible]
	Safety	10	40	0	50		10	10	100	0	45		10	0	55	0	45	1	5	2	[illegible]	3	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	13	[illegible]
	Security	0	30	0	5		25	0	60	0	5		25	0	30	0	5	0	25	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	0	5	0	5		5	0	15	0	5		5	0	10	0	5	2	5	1	[illegible]	3	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	3	[illegible]
Surgical, Pathological & Animals	Sanitation	15	20	15	25	0	35	30	80	10	20		15	10	35	5	10		[illegible]	0	[illegible]	5	[illegible]		[illegible]		[illegible]		[illegible]	45	[illegible]
	Safety	2	5	0	10	0	5	2	20	2	5		10	2	15	7	15		[illegible]	0	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	11	[illegible]
	Security	0	5	0	5	0	35	0	45	0	5		35	0	40	0	5		[illegible]	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	0	[illegible]
	Esthetics	10	10	0	5	0	15	10	30	2	5		15	2	20	2	5		[illegible]	5	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	19	[illegible]
Soiled Linen	Sanitation	30	40	35	50		30	65	120	20	80		50	20	130	0	[illegible]	7	[illegible]	5	[illegible]	12	[illegible]		[illegible]		[illegible]		[illegible]	97	[illegible]
	Safety	2	5	2	5		5	4	15	0	5		5	0	10	0	[illegible]	1	[illegible]	0	[illegible]	1	[illegible]		[illegible]		[illegible]		[illegible]	5	[illegible]
	Security	2	5	0	5		5	2	15	0	5		15	0	20	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	2	[illegible]
	Esthetics	15	20	10	15		10	25	45	0	10		10	0	20	0	[illegible]	2	[illegible]	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	27	[illegible]
Rubbish	Sanitation	2	5	5	10		10	7	25	5	20		15	5	35	0	[illegible]	2	[illegible]	4	[illegible]	6	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	18	[illegible]
	Safety	7	15	10	20		25	17	60	0	20		45	0	65	0	[illegible]	6	[illegible]	6	[illegible]	12	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	29	[illegible]
	Security	2	5	0	5		20	2	30	0	5		15	0	20	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	2	[illegible]
	Esthetics	10	15	7	15		10	17	40	0	10		10	0	20	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	19	[illegible]
Reusable Patient Items	Sanitation		15	10	20	5	25	15	60		15		15		30		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	15	[illegible]
	Safety		15	10	20	0	5	10	40		15		5		20		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	10	[illegible]
	Security		15	0	5	7	15	7	35		5		15		20		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
	Esthetics		5	2	5	2	5	4	15		5		5		10		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	4	[illegible]
Non-Combustible	Sanitation	2	5	5	10		10	7	25	4	15		5	4	20	0	5	1	5	1	[illegible]	2	[illegible]	2	[illegible]	30	[illegible]	32	[illegible]	45	[illegible]
	Safety	10	20	7	15		20	17	55	0	15		20	0	35	0	10	2	30	2	[illegible]	4	[illegible]	0	[illegible]	13	[illegible]	13	[illegible]	34	[illegible]
	Security	5	10	0	5		15	5	30	0	5		10	0	15	0	5	0	10	0	[illegible]	0	[illegible]	0	[illegible]	15	[illegible]	15	[illegible]	20	[illegible]
	Esthetics	5	10	2	5		5	7	20	0	5		5	0	10	0	5	1	5	1	[illegible]	2	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	13	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	2	5		15	4	25	1	5		15	1	20	0	5	1	5	4	[illegible]	5	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	10	[illegible]
	Safety	2	5	2	5		5	4	15	0	5		5	0	10	0	5	1	5	1	[illegible]	2	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	6	[illegible]
	Security	0	5	0	5		5	0	15	0	5		5	0	10	0	5	0	5	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	4	15	1	5		10	5	30	0	5		10	0	15	0	5	2	10	1	[illegible]	3	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	8	[illegible]
Food Service Items	Sanitation	2	5	2	5	2	10	6	20	2	5	10	10	12	15	2	5		5	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	20	[illegible]
	Safety	5	10	5	10	2	10	12	30	2	5	5	10	7	15	2	5		5	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	21	[illegible]
	Security	0	5	0	5	2	5	2	15	0	5	5	5	5	10	0	5		5	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
	Esthetics	2	5	2	5	2	5	6	15	2	5	2	5	4	10	2	5		5	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	12	[illegible]
Total	Sanitation	53	135	74	185	7	155	134	475	54	210	10	165	64	375	7	135	14	85	19	[illegible]	40	[illegible]	2	[illegible]	30	[illegible]	32	[illegible]	270	[illegible]
	Safety	38	115	36	135	2	85	76	335	4	115	5	110	9	225	9	130	11	70	11	[illegible]	31	[illegible]	0	[illegible]	13	[illegible]	13	[illegible]	129	[illegible]
	Security	9	80	0	40	9	125	18	245	0	40	5	125	5	165	0	45	0	115	0	[illegible]	0	[illegible]	0	[illegible]	15	[illegible]	15	[illegible]	38	[illegible]
	Esthetics	46	85	24	60	4	65	74	210	4	50	2	65	6	115	4	40	8	55	9	[illegible]	21	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	105	[illegible]
TOTAL		146	415	134	420	22	430	302	1265	62	415	22	465	84	880	20	350	33	325	39	365	92	1040	4	275	60	840	64	1115	542	[illegible]

SYSTEM 2

Type of Waste		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal				Vertical Transfer		Intermediate Storage, Processing, Disposal				Internal Transfer		Central Storage		Central Processing or Disposal				External Transfer		Final Processing and/or Disposal					
		Def Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value Total	Max. Value Total	Def Value	Max. Value	Def. Value	Max Value	Def Value Total	Max. Value Total	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value Total	Max. Value Total	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
Sharps, Needles, Etc.	Sanitation	0	40	0	60		20	0	120	12	50		20	12	70	0	50	3	10	10	[illegible]	13	[illegible]		[illegible]		[illegible]		[illegible]	25	[illegible]
	Safety	10	40	0	50		10	10	100	0	45		10	0	55	0	45	1	5	5	[illegible]	6	[illegible]		[illegible]		[illegible]		[illegible]	16	[illegible]
	Security	0	30	0	5		25	0	60	0	5		25	0	30	0	5	0	25	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	0	[illegible]
	Esthetics	0	5	0	5		5	0	15	0	5		5	0	10	0	5	2	5	5	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
Surgical, Pathological & Animals	Sanitation	15	20	15	25	0	35	30	80	10	20		15	10	35	5	10		[illegible]	0	[illegible]	5	[illegible]		[illegible]		[illegible]		[illegible]	45	[illegible]
	Safety	2	5	0	10	0	5	2	20	2	5		10	2	15	7	15		[illegible]	0	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	11	[illegible]
	Security	0	5	0	5	0	35	0	45	0	5		35	0	40	0	5		[illegible]	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	0	[illegible]
	Esthetics	10	10	0	5	0	15	10	30	2	5		15	2	20	2	5		[illegible]	5	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	19	[illegible]
Soiled Linen	Sanitation	30	40	35	50		30	65	120	20	80		50	20	130	0	30	7	[illegible]	5	[illegible]	12	[illegible]		[illegible]		[illegible]		[illegible]	97	[illegible]
	Safety	2	5	2	5		5	4	15	0	5		5	0	10	0	10	1	[illegible]	0	[illegible]	1	[illegible]		[illegible]		[illegible]		[illegible]	5	[illegible]
	Security	2	5	0	5		5	2	15	0	5		15	0	20	0	15	0	[illegible]	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	2	[illegible]
	Esthetics	15	20	10	15		10	25	45	0	10		10	0	20	0	5	2	[illegible]	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	27	[illegible]
Rubbish	Sanitation	2	5	5	10		10	7	25	5	20		15	5	35	0	10	2	[illegible]	8	[illegible]	10	[illegible]		[illegible]		[illegible]		[illegible]	22	[illegible]
	Safety	7	15	10	20		25	17	60	0	20		45	0	65	0	15	6	[illegible]	12	[illegible]	18	[illegible]		[illegible]		[illegible]		[illegible]	35	[illegible]
	Security	2	5	0	5		20	2	30	0	5		15	0	20	0	5	0	[illegible]	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	2	[illegible]
	Esthetics	10	15	7	15		10	17	40	0	10		10	0	20	0	5	1	[illegible]	5	[illegible]	6	[illegible]		[illegible]		[illegible]		[illegible]	23	[illegible]
Reusable Patient Items	Sanitation		15	10	20	5	25	15	60		15		15		30		20		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	15	[illegible]
	Safety		15	10	20	0	5	10	40		15		5		20		15		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	10	[illegible]
	Security		15	0	5	7	15	7	35		5		15		20		10		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
	Esthetics		5	2	5	2	5	4	15		5		5		10		5		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	4	[illegible]
Non-Combustible	Sanitation	2	5	5	10		10	7	25	4	15		5	4	20	0	5	1	5	3	[illegible]	4	[illegible]	2	[illegible]	15	[illegible]	17	[illegible]	32	[illegible]
	Safety	10	20	7	15		20	17	55	0	15		20	0	35	0	10	2	30	5	[illegible]	7	[illegible]	2	[illegible]	6	[illegible]	8	[illegible]	32	[illegible]
	Security	5	10	0	5		15	5	30	0	5		10	0	15	0	5	0	10	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	5	[illegible]
	Esthetics	5	10	2	5		5	7	20	0	5		5	0	10	0	5	1	5	5	[illegible]	6	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	15	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	2	5		15	4	25	1	5		15	1	20	0	5	1	5	8	[illegible]	9	[illegible]		[illegible]		[illegible]		[illegible]	14	[illegible]
	Safety	2	5	2	5		5	4	15	0	5		5	0	10	0	5	1	5	3	[illegible]	4	[illegible]		[illegible]		[illegible]		[illegible]	8	[illegible]
	Security	0	5	0	5		5	0	15	0	5		5	0	10	0	5	0	5	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	0	[illegible]
	Esthetics	4	15	1	5		10	5	30	0	5		10	0	15	0	5	2	10	5	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	12	[illegible]
Food Service Items	Sanitation	2	5	2	5	2	10	6	20	2	5	10	10	12	15	2	5		5	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	20	[illegible]
	Safety	5	10	5	10	2	10	12	30	2	5	5	10	7	15	2	5		5	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	21	[illegible]
	Security	0	5	0	5	2	5	2	15	0	5	5	5	5	10	0	5		5	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
	Esthetics	2	5	2	5	2	5	6	15	2	5	2	5	4	10	2	5		5	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	12	[illegible]
Total	Sanitation	53	135	74	185	7	155	134	475	54	210	10	165	64	375	7	135	14	85	34	[illegible]	55	[illegible]	2	[illegible]	15	[illegible]	17	[illegible]	270	[illegible]
	Safety	38	115	36	135	2	85	76	335	4	115	5	110	9	225	9	130	11	70	25	[illegible]	45	[illegible]	2	[illegible]	6	[illegible]	8	[illegible]	138	[illegible]
	Security	9	80	0	40	9	125	18	245	0	40	5	125	5	165	0	45	0	115	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	23	[illegible]
	Esthetics	46	85	24	60	4	65	74	210	4	50	2	65	6	115	4	40	8	55	25	[illegible]	37	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	119	[illegible]
TOTAL		146	415	134	420	22	430	302	1265	62	415	22	465	84	880	20	350	33	325	84	365	137	1040	5	275	22	840	27	1115	550	[illegible]

Reproduced from best available copy.

NUMERICAL RATING OF HOSPITAL SOLID WASTE SYSTEMS

HARBOR GENERAL HOSPITAL - UNIT I

SYSTEMS 3

Type of Waste		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def Value	Max. Value	Def. Value	Max Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	40	0	50		30	0	130	12	50		20	12	[illegible]	0	[illegible]	3	[illegible]	5	[illegible]	8	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	20	[illegible]
	Safety	10	40	0	50		10	10	100	0	45		10	0	55	0	[illegible]	1	[illegible]	2	[illegible]	3	[illegible]	0	[illegible]	20	[illegible]	20	[illegible]	33	[illegible]
	Security	0	[illegible]	0	5		25	0	60	0	5		25	0	30	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	60	[illegible]	60	[illegible]	60	[illegible]
	Esthetics	0	5	0	5		5	0	15	0	5		5	0	10	0	5	2	[illegible]	1	[illegible]	3	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	3	[illegible]
Surgical, Patho-logical & Animals	Sanitation	15	[illegible]	15	[illegible]	0	[illegible]	30	[illegible]	10	[illegible]		[illegible]	10	[illegible]	5	[illegible]		[illegible]	0	[illegible]	5	[illegible]		[illegible]		[illegible]		[illegible]	45	[illegible]
	Safety	2	[illegible]	0	[illegible]	0	[illegible]	2	[illegible]	2	5		10	2	15	7	[illegible]		[illegible]	0	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	11	[illegible]
	Security	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	5		35	0	40	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	0	[illegible]
	Esthetics	10	[illegible]	0	[illegible]	0	[illegible]	10	[illegible]	2	5		15	2	[illegible]	2	[illegible]		[illegible]	5	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	19	[illegible]
Soiled Linen	Sanitation	30	[illegible]	35	[illegible]		[illegible]	65	[illegible]	20	[illegible]		[illegible]	20	[illegible]	0	[illegible]	7	[illegible]	5	[illegible]	12	[illegible]		[illegible]		[illegible]		[illegible]	97	[illegible]
	Safety	2	[illegible]	2	[illegible]		[illegible]	4	[illegible]	0	5		5	0	[illegible]	0	[illegible]	1	[illegible]	0	[illegible]	1	[illegible]		[illegible]		[illegible]		[illegible]	5	[illegible]
	Security	2	[illegible]	0	[illegible]		[illegible]	2	[illegible]	0	5		15	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	2	[illegible]
	Esthetics	15	[illegible]	10	[illegible]		[illegible]	25	[illegible]	0	[illegible]		10	0	[illegible]	0	[illegible]	2	[illegible]	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	27	[illegible]
Rubbish	Sanitation	2	[illegible]	5	[illegible]		[illegible]	7	[illegible]	5	[illegible]		15	5	[illegible]	0	[illegible]	2	[illegible]	4	[illegible]	6	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	18	[illegible]
	Safety	7	15	10	[illegible]		[illegible]	17	[illegible]	0	[illegible]		45	0	65	0	[illegible]	6	[illegible]	6	[illegible]	12	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	29	[illegible]
	Security	2	5	0	5		[illegible]	2	[illegible]	0	5		15	0	20	0	5	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	30	[illegible]	30	[illegible]	32	[illegible]
	Esthetics	10	15	7	15		[illegible]	17	[illegible]	0	[illegible]		10	0	[illegible]	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	19	[illegible]
Reusable Patient Items	Sanitation		15	10	[illegible]	5	[illegible]	15	[illegible]		15		15		30		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	15	[illegible]
	Safety		15	10	[illegible]	0	[illegible]	10	[illegible]		15		5		20		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	10	[illegible]
	Security		15	0	5	7	15	7	[illegible]		5		15		20		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
	Esthetics		5	2	5	2	5	4	15		5		5		10		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	4	[illegible]
Non-Combustible	Sanitation	2	[illegible]	5	[illegible]		[illegible]	7	[illegible]	4	15		5	4	20	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	2	[illegible]	30	[illegible]	32	[illegible]	45	[illegible]
	Safety	10	[illegible]	7	15		[illegible]	17	[illegible]	0	15		20	0	35	0	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	1	[illegible]	6	[illegible]	7	[illegible]	28	[illegible]
	Security	5	[illegible]	0	5		15	5	[illegible]	0	5		10	0	15	0	5	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	15	[illegible]	15	[illegible]	20	[illegible]
	Esthetics	5	[illegible]	2	5		5	7	[illegible]	0	5		5	0	10	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	13	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	2	5		15	4	25	1	5		15	1	20	0	[illegible]	1	[illegible]	4	[illegible]	5	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	10	[illegible]
	Safety	2	5	2	5		5	4	15	0	5		5	0	10	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	6	[illegible]
	Security	0	5	0	5		5	0	15	0	5		5	0	10	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	5	[illegible]	5	[illegible]	5	[illegible]
	Esthetics	4	[illegible]	1	5		[illegible]	5	[illegible]	0	5		10	0	15	0	[illegible]	2	[illegible]	1	[illegible]	3	[illegible]	4	[illegible]	0	[illegible]	4	[illegible]	12	[illegible]
Food Service Items	Sanitation	2	5	2	5	2	[illegible]	6	25	2	5	10	10	12	15	2	[illegible]		[illegible]	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	20	[illegible]
	Safety	5	[illegible]	5	[illegible]	2	[illegible]	12	30	2	5	5	10	7	15	2	[illegible]		[illegible]	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	21	[illegible]
	Security	0	5	0	5	2	5	2	15	0	5	5	5	5	10	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
	Esthetics	2	5	2	5	2	5	6	15	2	5	2	5	4	10	2	[illegible]		[illegible]	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	12	[illegible]
Total	Sanitation	53	[illegible]	74	[illegible]	2	[illegible]	134	425	54	220	10	345	64	325	7	135	14	[illegible]	19	[illegible]	40	[illegible]	2	[illegible]	30	[illegible]	32	[illegible]	270	[illegible]
	Safety	38	135	36	[illegible]	2	[illegible]	74	[illegible]	4	115	5	110	9	225	9	[illegible]	11	[illegible]	11	[illegible]	31	[illegible]	1	[illegible]	26	[illegible]	27	[illegible]	143	[illegible]
	Security	9	[illegible]	0	[illegible]	9	[illegible]	18	[illegible]	0	40	5	125	5	140	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	110	[illegible]	110	[illegible]	133	[illegible]
	Esthetics	46	[illegible]	24	[illegible]	4	[illegible]	74	[illegible]	4	[illegible]	2	40	6	115	4	[illegible]	8	[illegible]	9	[illegible]	21	[illegible]	4	[illegible]	2	[illegible]	6	[illegible]	107	[illegible]
TOTAL		146	415	134	[illegible]	22	[illegible]	302	1265	62	415	22	465	84	[illegible]	20	[illegible]	33	325	39	365	92	[illegible]	9	270	168	[illegible]	177	1118	655	[illegible]

SYSTEM 4

Type of Waste		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max Value Total	Def. Value Total	Max. Value Total
		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def Value	Max. Value	Def. Value	Max Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	40	0	50		30	0	130	12	50		20	12	[illegible]	0	[illegible]	3	[illegible]	5	[illegible]	8	[illegible]	5	[illegible]	40	[illegible]	45	[illegible]	65	[illegible]
	Safety	10	40	0	50		10	10	100	0	45		10	0	55	0	[illegible]	1	[illegible]	2	[illegible]	3	[illegible]	2	[illegible]	38	[illegible]	40	[illegible]	53	[illegible]
	Security	0	[illegible]	0	5		25	0	60	0	5		25	0	30	0	5	0	25	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	0	5	0	5		5	0	15	0	5		5	0	10	0	5	2	5	1	[illegible]	3	[illegible]	1	[illegible]	5	[illegible]	6	[illegible]	9	[illegible]
Surgical, Patho-logical & Animals	Sanitation	15	[illegible]	15	[illegible]	0	[illegible]	30	[illegible]	10	[illegible]		15	10	[illegible]	5	[illegible]		[illegible]	0	[illegible]	5	[illegible]		[illegible]		[illegible]		[illegible]	45	[illegible]
	Safety	2	5	0	[illegible]	0	5	2	[illegible]	2	5		10	2	15	7	15		[illegible]	0	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	11	[illegible]
	Security	0	[illegible]	0	5	0	[illegible]	0	[illegible]	0	5		35	0	40	0	5		[illegible]	0	5	0	[illegible]		[illegible]		[illegible]		[illegible]	0	[illegible]
	Esthetics	10	[illegible]	0	[illegible]	0	[illegible]	10	[illegible]	2	5		15	2	[illegible]	2	[illegible]		[illegible]	5	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	19	[illegible]
Soiled Linen	Sanitation	30	[illegible]	35	[illegible]		[illegible]	65	[illegible]	20	[illegible]		[illegible]	20	[illegible]	0	[illegible]	7	[illegible]	5	[illegible]	12	[illegible]		[illegible]		[illegible]		[illegible]	97	[illegible]
	Safety	2	5	2	5		5	4	15	0	5		5	0	[illegible]	0	[illegible]	1	[illegible]	0	[illegible]	1	[illegible]		[illegible]		[illegible]		[illegible]	5	[illegible]
	Security	2	5	0	[illegible]		[illegible]	2	15	0	5		15	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	2	[illegible]
	Esthetics	15	[illegible]	10	15		[illegible]	25	[illegible]	0	[illegible]		10	0	[illegible]	0	5	2	[illegible]	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	27	[illegible]
Rubbish	Sanitation	2	5	5	[illegible]		10	7	[illegible]	5	[illegible]		15	5	[illegible]	0	[illegible]	2	[illegible]	4	[illegible]	6	[illegible]	2	[illegible]	28	[illegible]	30	[illegible]	48	[illegible]
	Safety	7	15	10	[illegible]		[illegible]	17	[illegible]	0	[illegible]		45	0	65	0	15	6	[illegible]	6	[illegible]	12	[illegible]	2	[illegible]	12	[illegible]	14	[illegible]	43	[illegible]
	Security	2	5	0	5		[illegible]	2	[illegible]	0	5		15	0	20	0	5	0	15	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	2	[illegible]
	Esthetics	10	15	7	15		[illegible]	17	[illegible]	0	[illegible]		10	0	[illegible]	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	6	[illegible]	25	[illegible]
Reusable Patient Items	Sanitation		15	10	[illegible]	5	[illegible]	15	[illegible]		15		15		30		[illegible]		[illegible]		15		[illegible]		[illegible]		[illegible]		[illegible]	15	[illegible]
	Safety		15	10	[illegible]	0	[illegible]	10	[illegible]		15		5		20		15		[illegible]		15		[illegible]		[illegible]		[illegible]		[illegible]	10	[illegible]
	Security		15	0	5	7	15	7	[illegible]		5		15		20		10		15		15		[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
	Esthetics		5	2	5	2	5	4	15		5		5		10		5		5		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	4	[illegible]
Non-Combustible	Sanitation	2	[illegible]	5	[illegible]		[illegible]	7	[illegible]	4	15		5	4	20	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	2	[illegible]	30	[illegible]	32	[illegible]	45	[illegible]
	Safety	10	[illegible]	7	15		[illegible]	17	[illegible]	0	15		20	0	35	0	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	0	[illegible]	13	[illegible]	13	[illegible]	34	[illegible]
	Security	5	[illegible]	0	5		15	5	[illegible]	0	5		10	0	15	0	5	0	[illegible]	0	5	0	[illegible]	0	[illegible]	15	[illegible]	15	[illegible]	20	[illegible]
	Esthetics	5	[illegible]	2	5		5	7	[illegible]	0	5		5	0	10	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	13	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	2	5		15	4	25	1	5		15	1	20	0	[illegible]	1	[illegible]	4	14	5	[illegible]	2	[illegible]	8	[illegible]	10	[illegible]	20	[illegible]
	Safety	2	5	2	5		5	4	15	0	5		5	0	10	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	1	[illegible]	5	[illegible]	6	[illegible]	12	[illegible]
	Security	0	5	0	5		5	0	15	0	5		5	0	10	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	4	[illegible]	1	5		[illegible]	5	[illegible]	0	5		10	0	15	0	[illegible]	2	[illegible]	1	[illegible]	3	[illegible]	4	[illegible]	4	[illegible]	8	[illegible]	16	[illegible]
Food Service Items	Sanitation	2	5	2	5	2	[illegible]	6	25	2	5	10	10	12	15	2	[illegible]		[illegible]	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	20	[illegible]
	Safety	5	[illegible]	5	[illegible]	2	[illegible]	12	30	2	5	5	10	7	15	2	[illegible]		[illegible]	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	21	[illegible]
	Security	0	5	0	5	2	5	2	15	0	5	5	5	5	10	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
	Esthetics	2	5	2	5	2	5	6	15	2	5	2	5	4	10	2	[illegible]		[illegible]	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	12	[illegible]
Total	Sanitation	53	[illegible]	74	[illegible]	7	[illegible]	134	425	54	220	10	345	64	325	7	135	14	[illegible]	19	[illegible]	40	[illegible]	11	[illegible]	105	[illegible]	117	[illegible]	355	[illegible]
	Safety	38	135	36	[illegible]	2	[illegible]	74	[illegible]	4	115	5	110	9	225	9	[illegible]	11	[illegible]	11	[illegible]	31	[illegible]	5	[illegible]	68	[illegible]	73	[illegible]	189	[illegible]
	Security	9	[illegible]	0	[illegible]	9	[illegible]	18	[illegible]	0	40	5	125	5	140	0	[illegible]	0	115	0	[illegible]	0	[illegible]	0	[illegible]	15	[illegible]	15	[illegible]	133	[illegible]
	Esthetics	46	[illegible]	24	[illegible]	4	[illegible]	74	[illegible]	4	[illegible]	2	40	6	115	4	[illegible]	8	[illegible]	9	[illegible]	21	[illegible]	9	[illegible]	15	[illegible]	24	[illegible]	125	[illegible]
TOTAL		146	415	134	[illegible]	22	[illegible]	302	1265	62	415	22	465	84	[illegible]	20	[illegible]	33	325	39	365	92	[illegible]	25	275	204	[illegible]	229	1118	707	[illegible]

ESTIMATED DAILY LABOR COSTS OF HOSPITAL SOLID WASTE SYSTEMS

HARBOR GENERAL HOSPITAL - UNIT I

SYSTEMS 1, 4 & 5

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	3.0	$ 17.16	$ 17.16						Engin.Op.I Engin. Op.II	$5.28 4.94	0.1 0.1	$ 0.53 0.49	$ 1.02						$ 18.18
Pathological and Surgical	Autopsy Asst. Lab Tech.	4.23 4.12	1.0 1.0	4.23 4.12	8.35	Autopsy Asst. Lab Tech. Truck Dr.	$4.23 4.12 4.74	0.25 0.25 0.25	$ 1.06 1.03 1.19	$ 3.28	Autopsy Asst. Truck Dr.	4.23 4.74	0.5 0.25	2.12 1.19	3.31						14.94
Soiled Linen	Attendant Custodian	3.34 3.71	85.0 6.0	283.90 22.26	306.16						Engin. Op.II	4.94	5.4	26.68	26.68						332.84
Rubbish	Custodian	3.71	200.0	742.00	742.00						Engin.Op.I Engin. Op.II	5.28 4.94	6.6 2.1	34.85 10.37	45.22						787.22
Reusable Patient Items	Attendant	3.34	5.0	16.70	16.70																16.70
Non-Combustible	Custodian	3.71	6.0	22.26	22.26						Engin.Op.I Engin. Op.II	5.28 4.94	0.6 0.2	3.17 0.99	4.16	Truck Dr.	$4.74	1.0	$4.74	$4.74	31.16
Garbage (Non-Grindable)	Fd.Srv.Wkr.	3.42	4.0	13.68	13.68						Engin.Op.I Engin. Op.II	5.28 4.94	0.7 0.2	3.70 0.99	4.69						18.37
Food Service Items	Attendant Fd.Srv.Wkr.	3.34 3.42	50.0 5.0	167.00 17.10	184.10	Fd.Srv.Wkr.	3.42	5.0	17.10	17.10											201.20
Radiological	Lab.Tech.	4.12	1.0	4.12	4.12	Lab.Tech.	4.12	0.5	2.06	2.06	Lab.Tech.	4.12	0.5	2.06	2.06						8.24
Ash & Residue																					
Animal Carcasses	Lab.Tech.	4.12	0.25	1.03	1.03	Lab.Tech.	4.12	0.1	0.41	0.41	Truck Dr. Autopsy Asst.	4.74 4.23	0.1 0.1	0.47 0.42	0.89						2.33
Food Waste (Grindable)	Fd.Srv.Wkr.	3.42	8.0	27.36	27.36																27.36
					$1342.92					$22.85					$88.03					$4.74	$1458.54

SYSTEM 2

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	3.0	$ 17.16	$ 17.16						Engin. Op.II Inc. Op.	$4.94 5.78	0.1 0.1	$ 0.49 0.58	$ 1.07						$ 18.23
Pathological and Surgical	Autopsy Asst. Lab Tech.	4.23 4.12	1.0 1.0	4.23 4.12	8.35	Autopsy Asst. Lab Tech. Truck Dr.	$4.23 4.12 4.74	0.25 0.25 0.25	$ 1.06 1.03 1.19	$ 3.28	Autopsy Asst. Truck Dr.	4.23 4.74	0.5 0.25	2.12 1.19	3.31						14.94
Soiled Linen	Attendant Custodian	3.34 3.71	85.0 6.0	283.90 22.26	306.16						Engin. Op.II	4.94	5.4	26.68	26.68						332.04
Rubbish	Custodian	3.71	200.0	742.00	742.00						Engin. Op.II Inc. Op.	4.94 5.78	2.1 5.7	10.37 32.95	45.32						787.32
Reusable Patient Items	Attendant	3.34	5.0	16.70	16.70																16.70
Non-Combustible	Custodian	3.71	6.0	22.26	22.26						Engin. Op.II Inc. Op.	4.94 5.78	0.2 0.5	0.99 2.89	3.88	Truck Dr.	$4.74	0.5	$2.37	$2.37	28.51
Garbage (Non-Grindable)	Fd.Srv.Wkr.	3.42	4.0	13.68	13.68						Engin. Op.II Inc. Op.	4.94 5.78	0.2 0.7	0.99 4.05	5.04						18.72
Food Service Items	Attendant Fd.Srv.Wkr.	3.34 3.42	50.0 5.0	167.00 17.10	184.10	Fd.Srv.Wkr.	3.42	5.0	17.10	17.10											201.20
Radiological	Lab Tech.	4.12	1.0	4.12	4.12	Lab Tech.	4.12	0.5	2.06	2.06	Lab.Tech.	4.12	0.5	2.06	2.06						8.24
Ash & Residue											Inc. Op.	5.78	1.0	5.78	5.78	Truck Dr.	4.74	0.5	2.37	2.37	8.15
Animal Carcasses	Lab Tech.	4.12	0.25	1.03	1.03	Lab Tech.	4.12	0.1	0.41	0.41	Truck Dr. Autopsy Asst.	4.74 4.23	0.1 0.1	0.47 0.42	0.89						2.33
Food Waste (Grindable)	Fd.Srv.Wkr.	3.42	8.0	27.36	27.36																27.36
					$1342.92					$22.85					$94.03					$4.74	$1464.54

ESTIMATED DAILY LABOR COSTS OF HOSPITAL SOLID WASTE SYSTEMS

HARBOR GENERAL HOSPITAL - UNIT I

SYSTEMS 3, 6 & 7

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	3.0	$ 17.16	$ 17.16						Equip. Op. I	$5.28	0.1	$ 0.53	$ 1.02	Truck Dr.	$4.74	0.1	$ 0.47	$ 0.47	$ 18.65
											Equip. Op. II	4.94	0.1	0.49							
Pathological and Surgical	Autopsy Asst.	4.23	1.0	4.23	8.35	Autopsy Asst.	$4.23	0.25	$ 1.06	$ 3.28	Autopsy Asst.	4.23	0.5	2.12	3.31						14.94
	Lab Tech.	4.12	1.0	4.12		Lab Tech.	4.12	0.25	1.03		Truck Dr.	4.74	0.25	1.19							
						Truck Dr.	4.74	0.25	1.19												
Soiled Linen	Attendant	3.34	85.0	283.90	306.16						Equip. Op. II	4.94	5.4	26.68	26.68						332.84
	Custodian	3.71	6.0	22.26																	
Rubbish	Custodian	3.71	200.0	742.00	742.00						Equip. Op. I	5.28	6.6	34.85	45.22	Truck Dr.	4.74	6.6	31.28	31.28	818.50
											Equip. Op. II	4.94	2.1	10.37							
Reusable Patient Items	Attendant	3.34	5.0	16.70	16.70																16.70
Non-Combustible	Custodian	3.71	6.0	22.26	22.26						Equip. Op. I	5.28	0.6	3.17	4.16	Truck Dr.	4.74	0.6	2.84	2.84	29.26
											Equip. Op. II	4.94	0.2	0.99							
Garbage (Non-Grindable)	Fd. Srv. Wkr	3.42	4.0	13.68	13.68						Equip. Op. I	5.28	0.7	3.70	4.69	Truck Dr.	4.74	0.7	3.32	3.32	21.69
											Equip. Op. II	4.94	0.2	0.99							
Food Service Items	Attendant	3.34	50.0	167.00	184.10	Fd. Srv. Wkr	3.42	5.0	17.10	17.10											201.20
	Fd. Srv. Wkr	3.42	5.0	17.10																	
Radiological	Lab Tech.	4.12	1.0	4.12	4.12	Lab Tech.	4.12	0.5	2.06	2.06	Lab Tech.	4.12	0.5	2.06	2.06						8.24
Ash & Residue																					
Animal Carcasses	Lab Tech.	4.12	0.25	1.03	1.03	Lab Tech.	4.12	0.1	0.41	0.41	Truck Dr.	4.74	0.1	0.47	0.89						2.33
											Autopsy Asst.	4.23	0.1	0.42							
Food Waste (Grindable)	Fd. Srv. Wkr	3.42	8.0	27.36	27.36																27.36
					$1342.92					$22.85					$88.03					$37.91	$1491.71

SYSTEM 8

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	3.0	$ 17.16	$ 17.16						Equip. Op. II	$4.94	0.1	$ 0.49	$ 0.49	Truck Dr.	$4.74	0.05	$0.24	$0.24	$ 17.89
Pathological and Surgical	Autopsy Asst.	4.23	1.0	4.23	8.35	Autopsy Asst.	$4.23	0.25	$ 1.06	$ 3.28	Autopsy Asst.	4.23	0.5	2.12	3.31						14.94
	Lab Tech.	4.12	1.0	4.12		Lab Tech.	4.12	0.25	1.03		Truck Dr.	4.74	0.25	1.19							
						Truck Dr.	4.74	0.25	1.19												
Soiled Linen	Attendant	3.34	85.0	283.90	306.16						Equip. Op. II	4.94	5.4	26.68	26.68						332.84
	Custodian	3.71	6.0	22.26																	
Rubbish	Custodian	3.71	200.0	742.00	742.00						Equip. Op. II	4.94	2.1	10.37	10.37	Truck Dr.	4.74	0.8	3.79	3.79	756.16
Reusable Patient Items	Attendant	3.34	5.0	16.70	16.70																16.70
Non-Combustible	Custodian	3.71	6.0	22.26	22.26						Equip. Op. II	4.94	0.2	0.99	0.99	Truck Dr.	4.74	0.05	0.24	0.24	23.49
Garbage (Non-Grindable)	Fd. Srv. Wkr	3.42	4.0	13.68	13.68						Equip. Op. II	4.94	0.2	0.99	0.99	Truck Dr.	4.74	0.1	0.47	0.47	15.14
Food Service Items	Attendant	3.34	50.0	167.00	184.10	Fd. Srv. Wkr	3.42	5.0	17.10	17.10											201.20
	Fd. Srv. Wkr	3.42	5.0	17.10																	
Radiological	Lab Tech.	4.12	1.0	4.12	4.12	Lab Tech.	4.12	0.5	2.06	2.06	Lab Tech.	4.12	0.5	2.06	2.06						8.24
Ash & Residue																					
Animal Carcasses	Lab Tech.	4.12	0.25	1.03	1.03	Lab Tech.	4.12	0.1	0.41	0.41	Truck Dr.	4.74	0.1	0.47	0.89						2.33
											Autopsy Asst.	4.23	0.1	0.42							
Food Waste (Grindable)	Fd. Srv. Wkr	3.42	8.0	27.36	27.36																27.36
					$1342.92					$22.85					$45.78					$4.74	$1416.29

ESTIMATED DAILY LABOR COSTS OF HOSPITAL SOLID WASTE SYSTEMS

HARBOR GENERAL HOSPITAL - UNIT I

SYSTEM 9

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	3.0	$ 17.16	$ 17.1						Equip. Op.II	$4.94	0.1	$ 0.49	$ 0.49	Truck Dr.	$4.74	0.1	$ 0.47	$ 0.47	18.12
Pathological and Surgical	Autopsy Asst.	4.23	1.0	4.23	8.3	Autopsy Asst.	$4.23	0.25	$ 1.06	$ 3.28	Autopsy Asst.	4.23	0.5	2.12	3.31						14.94
	Lab Tech.	4.12	1.0	4.12		Lab Tech.	4.12	0.25	1.03		Truck Dr.	4.74	0.25	1.19							
						Truck Dr.	4.74	0.25	1.19												
Soiled Linen	Attendant	3.34	85.0	283.90	306.1						Equip. Op.II	4.94	5.4	26.68	26.68						332.84
	Custodian	3.71	6.0	22.26																	
Rubbish	Custodian	3.71	200.0	742.00	742.0						Equip. Op.II	4.94	2.1	10.37	10.37	Truck Dr.	4.74	6.6	31.28	31.28	783.65
Reusable Patient Items	Attendant	3.34	5.0	16.70	16.7																16.70
Non-Combustible	Custodian	3.71	6.0	22.26	22.2						Equip. Op.II	4.94	0.2	0.99	0.99	Truck Dr.	4.74	0.6	2.84	2.84	26.09
Garbage (Non-Grindable)	Fd.Srv.Wkr	3.42	4.0	13.68	13.6						Equip. Op.II	4.94	0.2	0.99	0.99	Truck Dr.	4.74	0.7	3.32	3.32	17.99
Food Service Items	Attendant	3.34	50.0	167.00	184.1	Fd.Srv.Wkr	3.42	5.0	17.10	17.10											201.20
	Fd.Srv.Wkr	3.42	5.0	17.10																	
Radiological	Lab Tech.	4.12	1.0	4.12	4.1	Lab.Tech.	4.12	0.5	2.06	2.06	Lab Tech.	4.12	0.5	2.06	2.06						8.24
Ash & Residue																					
Animal Carcasses	Lab Tech.	4.12	0.25	1.03	1.0	Lab.Tech.	4.12	0.1	0.41	0.41	Truck Dr.	4.74	0.1	0.47	0.89						2.33
											Autopsy Asst.	4.23	0.1	0.42							
Food Waste (Grindable)	Fd.Srv.Wkr	3.42	8.0	27.36	27.3																27.36
					$1342.9					$22.85					$45.78					$37.91	$1449.46

Reproduced from best available copy.

NUMERICAL RATING OF HOSPITAL SOLID WASTE SYSTEMS

RANCHO LOS AMIGOS HOSPITAL

SYSTEM 1

Type of Waste		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	40	0	50		20	0	110		50		20		70	0	50	3	[illegible]	5	[illegible]	8	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	8	[illegible]
	Safety	10	40	0	50		10	10	100		45		10		55	0	40	1	[illegible]	2	[illegible]	3	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	13	[illegible]
	Security	0	30	0	5		25	0	60		5		25		30	0	5	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	0	5	0	5		5	0	15		5		5		10	0	5	2	[illegible]	1	[illegible]	3	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	3	[illegible]
Surgical, Pathological & Animals	Sanitation	0	20	0	25	20	25	20	70		20		15		35	0	[illegible]	3	[illegible]	0	[illegible]	3	[illegible]		[illegible]		[illegible]		[illegible]	23	[illegible]
	Safety	0	5	0	10	5	5	5	20		5		10		15	5	15	2	[illegible]	0	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	12	[illegible]
	Security	0	5	0	5	35	35	35	45		5		35		40	0	5	10	[illegible]	0	[illegible]	10	[illegible]		[illegible]		[illegible]		[illegible]	45	[illegible]
	Esthetics	0	10	0	5	15	15	15	30		5		15		20	2	[illegible]	5	[illegible]	0	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	22	[illegible]
Soiled Linen	Sanitation	30	40	5	50		30	35	120		50		50		100	0	[illegible]	7	[illegible]	0	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	42	[illegible]
	Safety	2	5	0	5		5	2	15		5		5		10	0	[illegible]	1	[illegible]	0	[illegible]	1	[illegible]		[illegible]		[illegible]		[illegible]	3	[illegible]
	Security	0	5	0	5		5	0	15		5		15		20	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	0	[illegible]
	Esthetics	5	20	0	15		10	5	45		10		10		20	0	[illegible]	2	[illegible]	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
Rubbish	Sanitation	2	5	0	10		10	2	25		20		15		35	0	[illegible]	2	[illegible]	4	[illegible]	6	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	8	[illegible]
	Safety	5	15	0	20		25	5	60		20		45		65	0	15	6	[illegible]	6	[illegible]	12	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	17	[illegible]
	Security	2	5	0	5		20	2	30		5		15		20	0	5	0	15	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	2	[illegible]
	Esthetics	7	15	0	15		10	7	40		10		10		20	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	9	[illegible]
Reusable Patient Items	Sanitation		15	10	20	5	25	15	60		15		15		30	5	20	0	[illegible]	0	[illegible]	5	[illegible]		[illegible]		[illegible]		[illegible]	20	[illegible]
	Safety		15	5	20	0	5	5	40		15		5		20	3	15	0	[illegible]	0	[illegible]	3	[illegible]		[illegible]		[illegible]		[illegible]	8	[illegible]
	Security		15	0	5	5	15	5	35		5		15		20	0	10	0	[illegible]	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	5	[illegible]
	Esthetics		5	2	5	2	5	4	15		5		5		10	2	5	0	[illegible]	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	6	[illegible]
Non-Combustible	Sanitation	2	5	0	10		10	2	25		15		5		20	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2	[illegible]	30	[illegible]	32	[illegible]	[illegible]	[illegible]
	Safety	5	20	0	15		20	5	55		15		20		35	0	10	2	30	2	[illegible]	4	[illegible]	0	[illegible]	13	[illegible]	13	[illegible]	22	[illegible]
	Security	5	10	0	5		15	5	30		5		10		15	0	5	0	30	0	5	0	[illegible]	0	[illegible]	15	[illegible]	15	[illegible]	20	[illegible]
	Esthetics	5	10	0	5		5	5	20		5		5		10	0	5	1	5	1	5	2	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	11	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	0	5		15	2	25		5		15		20	0	5	1	5	4	15	5	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	7	[illegible]
	Safety	0	5	0	5		5	0	15		5		5		10	0	5	1	5	1	5	2	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	2	[illegible]
	Security	0	5	0	5		5	0	15		5		5		10	0	5	0	5	0	5	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	4	15	0	5		10	4	30		5		10		15	0	5	2	10	1	5	3	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	7	[illegible]
Food Service Items	Sanitation	2	5	2	5	0	10	4	20		5	2	10	2	15	0	5		5	0	15	0	[illegible]		[illegible]		[illegible]		[illegible]	6	[illegible]
	Safety	5	10	0	10	0	10	5	30		5	5	10	5	15	0	5		5	0	10	0	[illegible]		[illegible]		[illegible]		[illegible]	10	[illegible]
	Security	0	5	0	5	0	5	0	15		5	2	5	2	10	0	5		5	0	5	0	[illegible]		[illegible]		[illegible]		[illegible]	2	[illegible]
	Esthetics	2	5	2	5	0	5	4	15		5	2	5	2	10	2	5		5	0	5	2	[illegible]		[illegible]		[illegible]		[illegible]	8	[illegible]
Total	Sanitation	38	135	17	185	25	155	80	475		210	2	145	2	325	5	135	19	85	14	165	38	[illegible]	2	[illegible]	30	[illegible]	32	[illegible]	152	[illegible]
	Safety	27	115	5	135	5	85	37	335		115	5	110	5	225	8	120	13	70	11	95	32	[illegible]	0	[illegible]	13	[illegible]	13	[illegible]	87	[illegible]
	Security	7	80	0	40	40	125	47	245		40	2	125	2	165	0	45	10	115	0	40	10	[illegible]	0	[illegible]	15	[illegible]	15	[illegible]	74	[illegible]
	Esthetics	23	85	4	60	17	65	44	210		50	2	65	2	115	6	40	13	55	4	45	23	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	73	[illegible]
TOTAL		95	415	26	420	87	430	208	1265		415	11	465	11	880	19	350	55	325	29	365	103	1040	4	275	60	840	64	1115	386	[illegible]

SYSTEM 2

Type of Waste		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def Value	Max. Value	Def. Value	Max Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	40	0	50		20	0	110		50		20		70	0	50	3	[illegible]	10	[illegible]	13	[illegible]		[illegible]		[illegible]		[illegible]	13	[illegible]
	Safety	10	40	0	50		10	10	100		45		10		55	0	40	1	5	5	[illegible]	6	[illegible]		[illegible]		[illegible]		[illegible]	16	[illegible]
	Security	0	30	0	5		25	0	60		5		25		30	0	5	0	25	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	0	[illegible]
	Esthetics	0	5	0	5		5	0	15		5		5		10	0	5	2	5	5	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
Surgical, Pathological & Animals	Sanitation	0	20	0	25	20	25	20	70		20		15		35	0	[illegible]	5	[illegible]	0	[illegible]	5	[illegible]		[illegible]		[illegible]		[illegible]	25	[illegible]
	Safety	0	5	0	10	5	5	5	20		5		10		15	5	15	2	[illegible]	0	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	12	[illegible]
	Security	0	5	0	5	35	35	35	45		5		35		40	0	5	10	[illegible]	0	[illegible]	10	[illegible]		[illegible]		[illegible]		[illegible]	45	[illegible]
	Esthetics	0	10	0	5	15	15	15	30		5		15		20	2	[illegible]	5	[illegible]	0	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	22	[illegible]
Soiled Linen	Sanitation	30	40	5	50		30	35	120		50		50		100	0	[illegible]	7	[illegible]	0	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	42	[illegible]
	Safety	2	5	0	5		5	2	15		5		5		10	0	[illegible]	1	[illegible]	0	[illegible]	1	[illegible]		[illegible]		[illegible]		[illegible]	3	[illegible]
	Security	0	5	0	5		5	0	15		5		15		20	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	0	[illegible]
	Esthetics	5	20	0	15		10	5	45		10		10		20	0	[illegible]	2	[illegible]	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
Rubbish	Sanitation	2	5	0	10		10	2	25		20		15		35	0	[illegible]	2	[illegible]	8	[illegible]	10	[illegible]		[illegible]		[illegible]		[illegible]	12	[illegible]
	Safety	5	15	0	20		25	5	60		20		45		65	0	15	6	[illegible]	12	[illegible]	18	[illegible]		[illegible]		[illegible]		[illegible]	23	[illegible]
	Security	2	5	0	5		20	2	30		5		15		20	0	5	0	15	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	2	[illegible]
	Esthetics	7	15	0	15		10	7	40		10		10		20	0	5	1	[illegible]	4	[illegible]	6	[illegible]		[illegible]		[illegible]		[illegible]	13	[illegible]
Reusable Patient Items	Sanitation		15	10	20	5	25	15	60		15		15		30	5	20	0	[illegible]	0	[illegible]	5	[illegible]		[illegible]		[illegible]		[illegible]	20	[illegible]
	Safety		15	5	20	0	5	5	40		15		5		20	3	15	0	[illegible]	0	[illegible]	3	[illegible]		[illegible]		[illegible]		[illegible]	8	[illegible]
	Security		15	0	5	5	15	5	35		5		15		20	0	10	0	15	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	5	[illegible]
	Esthetics		5	2	5	2	5	4	15		5		5		10	2	5	0	[illegible]	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	6	[illegible]
Non-Combustible	Sanitation	2	5	0	10		10	2	25		15		5		20	0	[illegible]	1	[illegible]	3	[illegible]	4	[illegible]	2	[illegible]	15	[illegible]	17	[illegible]	[illegible]	[illegible]
	Safety	5	20	0	15		20	5	55		15		20		35	0	10	2	30	5	30	7	[illegible]	2	[illegible]	6	[illegible]	8	[illegible]	20	[illegible]
	Security	5	10	0	5		15	5	30		5		10		15	0	5	0	30	0	5	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	5	[illegible]
	Esthetics	5	10	0	5		5	5	20		5		5		10	0	5	1	5	5	5	6	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	13	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	0	5		15	2	25		5		15		20	0	5	1	5	8	15	9	[illegible]		[illegible]		[illegible]		[illegible]	11	[illegible]
	Safety	0	5	0	5		5	0	15		5		5		10	0	5	1	5	3	5	4	[illegible]		[illegible]		[illegible]		[illegible]	4	[illegible]
	Security	0	5	0	5		5	0	15		5		5		10	0	5	0	5	0	5	0	[illegible]		[illegible]		[illegible]		[illegible]	0	[illegible]
	Esthetics	4	15	0	5		10	4	30		5		10		15	0	5	2	10	5	5	7	[illegible]		[illegible]		[illegible]		[illegible]	11	[illegible]
Food Service Items	Sanitation	2	5	2	5	0	10	4	20		5	2	10	2	15	0	5		5	0	15	0	[illegible]		[illegible]		[illegible]		[illegible]	6	[illegible]
	Safety	5	10	0	10	0	10	5	30		5	5	10	5	15	0	5		5	0	10	0	[illegible]		[illegible]		[illegible]		[illegible]	10	[illegible]
	Security	0	5	0	5	0	5	0	15		5	2	5	2	10	0	5		5	0	5	0	[illegible]		[illegible]		[illegible]		[illegible]	2	[illegible]
	Esthetics	2	5	2	5	0	5	4	15		5	2	5	2	10	2	5		5	0	5	2	[illegible]		[illegible]		[illegible]		[illegible]	8	[illegible]
Total	Sanitation	38	135	17	185	25	155	80	475		210	2	145	2	325	5	135	19	85	29	165	53	[illegible]	2	[illegible]	15	[illegible]	17	[illegible]	152	[illegible]
	Safety	27	115	5	135	5	85	37	335		115	5	110	5	225	8	120	13	70	25	95	46	[illegible]	2	[illegible]	6	[illegible]	8	[illegible]	96	[illegible]
	Security	7	80	0	40	40	125	47	245		40	2	125	2	165	0	45	10	115	0	40	10	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	59	[illegible]
	Esthetics	23	85	4	60	17	65	44	210		50	2	65	2	115	6	40	13	55	20	45	39	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	87	[illegible]
TOTAL		95	415	26	420	87	420	208	1265		415	11	465	11	880	19	350	55	325	74	365	148	1040	5	275	22	840	27	1115	394	[illegible]

Reproduced from best available copy.

NUMERICAL RATING OF HOSPITAL SOLID WASTE SYSTEMS

SYSTEMS 3

RANCHO LOS AMIGOS HOSPITAL

Type of Waste		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def Value	Max. Value	Def. Value	Max Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	40	0	50		20	0	110		50		20		70	0	30	3	[illegible]	5	[illegible]	8	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	8	[illegible]
	Safety	10	40	0	50		10	10	100		45		10		55	0	40	1	[illegible]	2	[illegible]	3	[illegible]	0	[illegible]	20	[illegible]	20	[illegible]	33	[illegible]
	Security	0	30	0	5		25	0	60		5		25		30	0	5	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	60	[illegible]	60	[illegible]	60	[illegible]
	Esthetics	0	5	0	5		5	0	15		5		5		10	0	5	2	5	1	5	3	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	3	[illegible]
Surgical, Pathological & Animals	Sanitation	0	20	0	35	20	35	20	90		20		35		55	0	[illegible]	5	[illegible]	0	[illegible]	5	[illegible]		[illegible]		[illegible]		[illegible]	25	[illegible]
	Safety	0	5	0	10	5	5	5	20		5		10		15	5	15	2	[illegible]	0	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	12	[illegible]
	Security	0	5	0	5	35	35	35	45		5		35		40	0	5	10	[illegible]	0	5	10	[illegible]		[illegible]		[illegible]		[illegible]	45	[illegible]
	Esthetics	0	10	0	5	15	15	15	30		5		15		20	2	[illegible]	5	[illegible]	0	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	22	[illegible]
Soiled Linen	Sanitation	30	40	5	50		30	35	120		80		50		130	0	[illegible]	7	[illegible]	0	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	42	[illegible]
	Safety	2	5	0	5		5	2	15		5		5		10	0	10	1	[illegible]	0	[illegible]	1	[illegible]		[illegible]		[illegible]		[illegible]	3	[illegible]
	Security	0	5	0	5		5	0	15		5		15		20	0	15	0	[illegible]	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	0	[illegible]
	Esthetics	5	20	0	15		10	5	45		10		10		20	0	5	2	[illegible]	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
Rubbish	Sanitation	2	5	0	10		10	2	25		20		15		35	0	10	2	[illegible]	4	[illegible]	6	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	8	[illegible]
	Safety	5	15	0	20		25	5	60		20		45		65	0	15	6	[illegible]	6	[illegible]	12	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	17	[illegible]
	Security	2	5	0	5		20	2	30		5		15		20	0	5	0	15	0	10	0	[illegible]	0	[illegible]	30	[illegible]	30	[illegible]	32	[illegible]
	Esthetics	7	15	0	15		10	7	40		10		10		20	0	5	1	5	1	5	2	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	9	[illegible]
Reusable Patient Items	Sanitation		15	10	20	5	25	15	60		15		15		30	5	20	0	10	0	15	5	[illegible]		[illegible]		[illegible]		[illegible]	20	[illegible]
	Safety		15	5	20	0	5	5	40		15		5		20	3	15	0	5	0	15	3	[illegible]		[illegible]		[illegible]		[illegible]	8	[illegible]
	Security		15	0	5	5	15	5	35		5		15		20	0	10	0	15	0	15	0	[illegible]		[illegible]		[illegible]		[illegible]	5	[illegible]
	Esthetics		5	2	5	2	5	4	15		5		5		10	2	5	0	5	0	5	2	[illegible]		[illegible]		[illegible]		[illegible]	6	[illegible]
Non-Combustible	Sanitation	2	5	0	10		10	2	25		15		5		20	0	5	1	5	1	5	2	[illegible]	2	[illegible]	30	[illegible]	32	[illegible]	36	[illegible]
	Safety	5	20	0	15		20	5	55		15		20		35	0	10	2	[illegible]	2	[illegible]	4	[illegible]	1	[illegible]	6	[illegible]	7	[illegible]	16	[illegible]
	Security	5	10	0	5		15	5	30		5		10		15	0	5	0	10	0	5	0	[illegible]	0	[illegible]	15	[illegible]	15	[illegible]	20	[illegible]
	Esthetics	5	10	0	5		5	5	20		5		5		10	0	5	1	5	1	5	2	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	11	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	0	5		15	2	25		5		15		20	0	5	1	5	4	15	5	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	7	[illegible]
	Safety	0	5	0	5		5	0	15		5		5		10	0	5	1	5	1	5	2	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	2	[illegible]
	Security	0	5	0	5		5	0	15		5		5		10	0	5	0	5	0	5	0	[illegible]	0	[illegible]	5	[illegible]	5	[illegible]	5	[illegible]
	Esthetics	4	15	0	5		10	4	30		5		10		15	0	5	2	10	1	5	3	[illegible]	4	[illegible]	0	[illegible]	4	[illegible]	11	[illegible]
Food Service Items	Sanitation	2	5	2	5	0	10	4	20		5	2	10	2	15	0	5		5	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	6	[illegible]
	Safety	5	10	0	10	0	10	5	30		5	5	10	5	15	0	5		5	0	10	0	[illegible]		[illegible]		[illegible]		[illegible]	10	[illegible]
	Security	0	5	0	5	0	5	0	15		5	2	5	2	10	0	5		5	0	5	0	[illegible]		[illegible]		[illegible]		[illegible]	2	[illegible]
	Esthetics	2	5	2	5	0	5	4	15		5	2	5	2	10	2	5		5	0	5	2	[illegible]		[illegible]		[illegible]		[illegible]	8	[illegible]
Total	Sanitation	38	135	17	185	25	155	80	475		210	2	165	2	375	5	135	19	85	14	165	38	[illegible]	2	[illegible]	30	[illegible]	32	[illegible]	152	[illegible]
	Safety	27	115	5	135	5	85	37	335		115	5	110	5	225	8	120	13	70	11	95	32	[illegible]	1	[illegible]	26	[illegible]	27	[illegible]	101	[illegible]
	Security	7	80	0	40	40	125	47	245		40	2	125	2	165	0	55	10	115	0	40	10	[illegible]	0	[illegible]	110	[illegible]	110	[illegible]	169	[illegible]
	Esthetics	23	85	4	60	17	65	44	210		50	2	65	2	115	6	40	13	55	4	65	23	[illegible]	6	[illegible]	2	[illegible]	[illegible]	[illegible]	77	[illegible]
TOTAL		95	415	26	420	87	430	208	1265		415	11	465	11	880	19	350	55	325	29	365	103	1040	9	275	168	840	177	1115	499	[illegible]

SYSTEM 4

Type of Waste		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def Value	Max. Value	Def. Value	Max Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	40	0	50		20	0	110		50		20		70	0	30	3	[illegible]	5	[illegible]	8	[illegible]	5	[illegible]	40	[illegible]	45	[illegible]	53	[illegible]
	Safety	10	40	0	50		10	10	100		45		10		55	0	40	1	[illegible]	2	[illegible]	3	[illegible]	2	[illegible]	38	[illegible]	40	[illegible]	53	[illegible]
	Security	0	30	0	5		25	0	60		5		25		30	0	5	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	0	5	0	5		5	0	15		5		5		10	0	5	2	5	1	5	3	[illegible]	1	[illegible]	5	[illegible]	6	[illegible]	9	[illegible]
Surgical, Pathological & Animals	Sanitation	0	20	0	35	20	35	20	90		20		35		55	0	[illegible]	5	[illegible]	0	[illegible]	5	[illegible]		[illegible]		[illegible]		[illegible]	25	[illegible]
	Safety	0	5	0	10	5	5	5	20		5		10		15	5	15	2	[illegible]	0	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	12	[illegible]
	Security	0	5	0	5	35	35	35	45		5		35		40	0	5	10	[illegible]	0	5	10	[illegible]		[illegible]		[illegible]		[illegible]	45	[illegible]
	Esthetics	0	10	0	5	15	15	15	30		5		15		20	2	[illegible]	5	[illegible]	0	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	22	[illegible]
Soiled Linen	Sanitation	30	40	5	50		30	35	120		80		50		130	0	[illegible]	7	[illegible]	0	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	42	[illegible]
	Safety	2	5	0	5		5	2	15		5		5		10	0	10	1	[illegible]	0	[illegible]	1	[illegible]		[illegible]		[illegible]		[illegible]	3	[illegible]
	Security	0	5	0	5		5	0	15		5		15		20	0	15	0	[illegible]	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	0	[illegible]
	Esthetics	5	20	0	15		10	5	45		10		10		20	0	5	2	[illegible]	0	[illegible]	2	[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
Rubbish	Sanitation	2	5	0	10		10	2	25		20		15		35	0	10	2	[illegible]	4	[illegible]	6	[illegible]	2	[illegible]	28	[illegible]	30	[illegible]	38	[illegible]
	Safety	5	15	0	20		25	5	60		20		45		65	0	15	6	[illegible]	6	[illegible]	12	[illegible]	2	[illegible]	12	[illegible]	14	[illegible]	31	[illegible]
	Security	2	5	0	5		20	2	30		5		15		20	0	5	0	15	0	10	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	2	[illegible]
	Esthetics	7	15	0	15		10	7	40		10		10		20	0	5	1	5	1	5	2	[illegible]	2	[illegible]	4	[illegible]	6	[illegible]	15	[illegible]
Reusable Patient Items	Sanitation		15	10	20	5	25	15	60		15		15		30	5	20	0	10	0	15	5	[illegible]		[illegible]		[illegible]		[illegible]	20	[illegible]
	Safety		15	5	20	0	5	5	40		15		5		20	3	15	0	5	0	15	3	[illegible]		[illegible]		[illegible]		[illegible]	8	[illegible]
	Security		15	0	5	5	15	5	35		5		15		20	0	10	0	15	0	15	0	[illegible]		[illegible]		[illegible]		[illegible]	5	[illegible]
	Esthetics		5	2	5	2	5	4	15		5		5		10	2	5	0	5	0	5	2	[illegible]		[illegible]		[illegible]		[illegible]	6	[illegible]
Non-Combustible	Sanitation	2	5	0	10		10	2	25		15		5		20	0	5	1	5	1	5	2	[illegible]	2	[illegible]	30	[illegible]	32	[illegible]	36	[illegible]
	Safety	5	20	0	15		20	5	55		15		20		35	0	10	2	[illegible]	2	[illegible]	4	[illegible]	0	[illegible]	13	[illegible]	13	[illegible]	22	[illegible]
	Security	5	10	0	5		15	5	30		5		10		15	0	5	0	10	0	5	0	[illegible]	0	[illegible]	15	[illegible]	15	[illegible]	20	[illegible]
	Esthetics	5	10	0	5		5	5	20		5		5		10	0	5	1	5	1	5	2	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	11	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	0	5		15	2	25		5		15		20	0	5	1	5	4	15	5	[illegible]	2	[illegible]	8	[illegible]	10	[illegible]	17	[illegible]
	Safety	0	5	0	5		5	0	15		5		5		10	0	5	1	5	1	5	2	[illegible]	1	[illegible]	5	[illegible]	6	[illegible]	8	[illegible]
	Security	0	5	0	5		5	0	15		5		5		10	0	5	0	5	0	5	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	4	15	0	5		10	4	30		5		10		15	0	5	2	10	1	5	3	[illegible]	4	[illegible]	[illegible]	[illegible]	8	[illegible]	15	[illegible]
Food Service Items	Sanitation	2	5	2	5	0	10	4	20		5	2	10	2	15	0	5		5	0	[illegible]	0	[illegible]		[illegible]		[illegible]		[illegible]	6	[illegible]
	Safety	5	10	0	10	0	10	5	30		5	5	10	5	15	0	5		5	0	10	0	[illegible]		[illegible]		[illegible]		[illegible]	10	[illegible]
	Security	0	5	0	5	0	5	0	15		5	2	5	2	10	0	5		5	0	5	0	[illegible]		[illegible]		[illegible]		[illegible]	2	[illegible]
	Esthetics	2	5	2	5	0	5	4	15		5	2	5	2	10	2	5		5	0	5	2	[illegible]		[illegible]		[illegible]		[illegible]	8	[illegible]
Total	Sanitation	38	135	17	185	25	155	80	475		210	2	165	2	375	5	135	19	85	14	165	38	[illegible]	11	[illegible]	106	[illegible]	117	[illegible]	237	[illegible]
	Safety	27	115	5	135	5	85	37	335		115	5	110	5	225	8	120	13	70	11	95	32	[illegible]	5	[illegible]	68	[illegible]	73	[illegible]	147	[illegible]
	Security	7	80	0	40	40	125	47	245		40	2	125	2	165	0	55	10	115	0	40	10	[illegible]	0	[illegible]	15	[illegible]	15	[illegible]	74	[illegible]
	Esthetics	23	85	4	60	17	65	44	210		50	2	65	2	115	6	40	13	55	4	65	23	[illegible]	9	[illegible]	15	[illegible]	24	[illegible]	93	[illegible]
TOTAL		95	415	26	420	87	430	208	1265		415	11	465	11	880	19	350	55	325	29	365	103	1040	25	275	204	840	229	1115	551	[illegible]

ESTIMATED DAILY LABOR COSTS OF HOSPITAL SOLID WASTE SYSTEMS

RANCHO LOS AMIGOS HOSPITAL

SYSTEMS 1, 4 & 5

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$ 5.72	8.0	$ 45.76	$ 45.76						Equip. Op. I Equip. Op. II	$5.28 4.94	0.1 0.1	$ 0.53 0.49	$ 1.02						$ 46.78
Pathological and Surgical	Nurse	5.72	0.5	2.86	2.86						Truck Dr.	4.74	0.5	2.37	2.37						5.23
Soiled Linen	Attendant	3.34	154.0	514.36	514.36						Equip. Op. II	4.94	6.2	30.63	30.63						544.99
Rubbish	Custodian	3.71	150.0	556.50	556.50						Equip. Op. I Equip. Op. II	5.28 4.94	5.0 1.0	26.40 4.94	31.34						587.84
Reusable Patient Items	Attendant	3.34	3.0	10.02	10.02						Truck Dr. Lab Tech.	4.74 4.12	1.5 3.0	7.11 12.36	19.47						29.49
Non-Combustible	Custodian	3.71	5.0	18.55	18.55						Equip. Op. I Equip. Op. II	5.28 4.94	1.3 0.3	6.86 1.48	8.34	Truck Dr.	$4.74	1.0	$4.74	$4.74	31.63
Garbage (Non-Grindable)	Fd.Srv.Wk	3.42	8.0	27.36	27.36						Equip. Op. I Equip. Op. II	5.28 4.94	1.5 0.3	7.92 1.48	9.40						36.76
Food Service Items	Fd.Srv.Wk Attendant	3.42 3.34	20.8 23.0	71.14 76.82	147.96	Fd.Srv.Wk	$3.42	3.9	$13.34	$13.34	Truck Dr. Fd.Srv.Wk	4.74 3.42	4.5 4.5	21.33 15.39	36.72						198.02
Radiological	Radiation Phys.	10.76	0.25	2.69	2.69																2.69
Ash & Residue	Truck Dr.	4.74	0.5	2.37	2.37						Equip. Op. I Equip. Op. II	5.28 4.94	0.1 0.1	0.53 0.49	1.02						3.39
Animal Carcasses	Anim. Caretkr.	3.51	0.75	2.63	2.63						Truck Dr.	4.74	0.75	3.56	3.56						6.19
Food Waste (Grindable)	Fd.Srv.Wk	3.42	10.0	34.20	34.20																34.20
					$1365.26					$13.34					$143.87					$4.74	$1527.21

SYSTEM 2

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$ 5.72	8.0	$ 45.76	$ 45.76						Equip. Op. II Inc. Op.	$4.94 5.78	0.1 0.1	$ 0.49 0.58	$ 1.07						$ 46.83
Pathological and Surgical	Nurse	5.72	0.5	2.86	2.86						Truck Dr.	4.74	0.5	2.37	2.37						5.23
Soiled Linen	Attendant	3.34	154.0	514.36	514.36						Equip. Op. II	4.94	6.2	30.63	30.63						544.99
Rubbish	Custodian	3.71	150.0	556.50	556.50						Equip. Op. II Inc. Op.	4.94 5.78	1.1 4.4	5.43 25.43	30.86						587.36
Reusable Patient Items	Attendant	3.34	3.0	10.02	10.02						Truck Dr. Lab Tech.	4.74 4.12	1.5 3.0	7.11 12.36	19.47						29.49
Non-Combustible	Custodian	3.71	5.0	18.55	18.55						Equip. Op. II Inc. Op.	4.94 5.78	0.3 1.1	1.48 6.36	7.84	Truck Dr.	$4.74	0.5	$2.37	$2.37	28.76
Garbage (Non-Grindable)	Fd.Srv.Wk	3.42	8.0	27.36	27.36						Equip. Op. II Inc. Op.	4.94 5.78	0.3 1.4	1.48 8.09	9.57						36.93
Food Service Items	Fd.Srv.Wk Attendant	3.42 3.34	20.8 23.0	71.14 76.82	147.96	Fd.Srv.Wk	$3.42	3.9	$13.34	$13.34	Truck Dr. Fd.Srv.Wk	4.74 3.42	4.5 4.5	21.33 15.39	36.72						198.02
Radiological	Radiation Phys.	10.76	0.25	2.69	2.69																2.69
Ash & Residue	Truck Dr.	4.74	0.5	2.37	2.37						Inc. Op.	5.78	1.0	5.78	5.78	Truck Dr.	4.74	0.5	2.37	2.37	10.52
Animal Carcasses	Anim. Caretkr.	3.51	0.75	2.63	2.63						Truck Dr.	4.74	0.75	3.56	3.56						6.19
Food Waste (Grindable)	Fd.Srv.Wk	3.42	10.0	34.20	34.20																34.20
					$1365.26					$13.34					$147.87					$4.74	$1531.21

ESTIMATED DAILY LABOR COSTS OF HOSPITAL SOLID WASTE SYSTEMS
SYSTEMS 3, 6 & 7

RANCHO LOS AMIGOS HOSPITAL

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$ 5.72	8.0	$ 45.76	$ 45.76						Equip.Op.I Equip. Op.II	$5.28 4.94	0.1 0.1	$ 0.53 0.49	$ 1.02	Truck Dr.	$4.74	0.1	$ 0.47	$ 0.47	$ 47.25
Pathological and Surgical	Nurse	5.72	0.5	2.86	2.86						Truck Dr.	4.74	0.5	2.37	2.37						5.23
Soiled Linen	Attendant	3.34	154.0	514.36	514.36						Equip. Op.II	4.94	6.2	30.63	30.63						544.99
Rubbish	Custodian	3.71	150.0	556.50	556.50						Equip.Op.I Equip. Op.II	5.28 4.94	5.0 1.0	26.40 4.94	31.34	Truck Dr.	4.74	5.0	23.70	23.70	611.54
Reusable Patient Items	Attendant	3.34	3.0	10.02	10.02						Truck Dr. Lab Tech.	4.74 4.12	1.5 3.0	7.11 12.36	19.47						29.49
Non-Combustible	Custodian	3.71	5.0	18.55	18.55						Equip.Op.I Equip. Op.II	5.28 4.94	1.3 0.3	6.86 1.48	8.34	Truck Dr.	4.74	1.3	6.16	6.16	33.05
Garbage (Non-Grindable)	Fd.Srv.Wk	3.42	8.0	27.36	27.36						Equip.Op.I Equip. Op.II	5.28 4.94	1.5 0.3	7.92 1.48	9.40	Truck Dr.	4.74	1.5	7.11	7.11	43.87
Food Service Items	Fd.Srv.Wk Attendant	3.42 3.34	20.8 23.0	71.14 76.82	147.96	Fd.Srv.Wk	$3.42	3.9	$13.34	$13.34	Truck Dr. Fd.Srv.Wk	4.74 3.42	4.5 4.5	21.33 15.39	36.72						198.02
Radiological	Radiation Phys.	10.76	0.25	2.69	2.69																2.69
Ash & Residue	Truck Dr.	4.74	0.5	2.37	2.37						Equip.Op.I Equip. Op.II	5.28 4.94	0.1 0.1	0.53 0.49	1.02	Truck Dr.	4.74	0.1	0.47	0.47	3.86
Animal Carcasses	Anim. Caretkr.	3.51	0.75	2.63	2.63						Truck Dr.	4.74	0.75	3.56	3.56						6.19
Food Waste (Grindable)	Fd.Srv.Wk	3.42	10.0	34.20	34.20																34.20
					$1365.26					$13.34					$143.27					$37.91	$1550.38

SYSTEM 8

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$ 5.72	8.0	$ 45.76	$ 45.76						Equip. Op.II	$4.94	0.1	$ 0.49	$ 0.49	Truck Dr.	$4.74	0.05	$0.24	$0.24	$ 46.49
Pathological and Surgical	Nurse	5.72	0.5	2.86	2.86						Truck Dr.	4.74	0.5	2.37	2.37						5.23
Soiled Linen	Attendant	3.34	154.0	514.36	514.36						Equip. Op.II	4.94	6.2	30.63	30.63						544.99
Rubbish	Custodian	3.71	150.0	556.50	556.50						Equip. Op.II	4.94	1.0	4.94	4.94	Truck Dr.	4.74	0.8	3.79	3.79	565.23
Reusable Patient Items	Attendant	3.34	3.0	10.02	10.02						Truck Dr. Lab Tech.	4.74 4.12	1.5 3.0	7.11 12.36	19.47						29.49
Non-Combustible	Custodian	3.71	5.0	18.55	18.55						Equip. Op.II	4.94	0.3	1.48	1.48	Truck Dr.	4.74	0.05	0.24	0.24	20.27
Garbage (Non-Grindable)	Fd.Srv.Wk	3.42	8.0	27.36	27.36						Equip. Op.II	4.94	0.3	1.48	1.48	Truck Dr.	4.74	0.05	0.24	0.24	29.08
Food Service Items	Fd.Srv.Wk Attendant	3.42 3.34	20.8 23.0	71.14 76.82	147.96	Fd.Srv.Wk	$3.42	3.9	$13.34	$13.34	Truck Dr. Fd.Srv.Wk	4.74 3.42	4.5 4.5	21.33 15.39	36.72						198.02
Radiological	Radiation Phys.	10.76	0.25	2.69	2.69																2.69
Ash & Residue	Truck Dr.	4.74	0.5	2.37	2.37						Equip. Op.II	4.94	0.1	0.49	0.49	Truck Dr.	4.74	0.05	0.24	0.24	3.10
Animal Carcasses	Anim. Caretkr.	3.51	0.75	2.63	2.63						Truck Dr.	4.74	0.75	3.56	3.56						6.19
Food Waste (Grindable)	Fd.Srv.Wk	3.42	10.0	34.20	34.20																34.20
					$1365.26					$13.34					$101.63					$4.75	$1484.98

ESTIMATED DAILY LABOR COSTS OF HOSPITAL SOLID WASTE SYSTEMS
SYSTEM 9

RANCHO LOS AMIGOS HOSPITAL

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$ 5.72	8.0	$ 45.76	$ 45.76						Equip. Op.II	$4.94	0.1	$ 0.49	$ 0.49	Truck Dr.	$4.74	0.1	$ 0.47	$ 0.47	$ 46.72
Pathological and Surgical	Nurse	5.72	0.5	2.86	2.86						Truck Dr.	4.74	0.5	2.37	2.37						5.23
Soiled Linen	Attendant	3.34	154.0	514.36	514.36						Equip. Op.II	4.94	6.2	30.63	30.63						544.99
Rubbish	Custodian	3.71	150.0	556.50	556.50						Equip. Op.II	4.94	1.0	4.94	4.94	Truck Dr.	4.74	5.0	23.70	23.70	585.14
Reusable Patient Items	Attendant	3.34	3.0	10.02	10.02						Truck Dr. Lab Tech.	4.74 4.12	1.5 3.0	7.11 12.36	19.47						29.49
Non-Combustible	Custodian	3.71	5.0	18.55	18.55						Equip. Op.II	4.94	0.3	1.48	1.48	Truck Dr.	4.74	1.3	6.16	6.16	26.19
Garbage (Non-Grindable)	Fd.Srv.Wk	3.42	8.0	27.36	27.36						Equip. Op.II	4.94	0.3	1.48	1.48	Truck Dr.	4.74	1.5	7.11	7.11	35.95
Food Service Items	Fd.Srv.Wk Attendant	3.42 3.34	20.8 23.0	71.14 76.82	147.96	Fd.Srv.Wk	$3.42	3.9	$13.34	$13.34	Truck Dr. Fd.Srv.Wk	4.74 3.42	4.5 4.5	21.33 15.39	36.72						198.02
Radiological	Radiation Phys.	10.76	0.25	2.69	2.69																2.69
Ash & Residue	Truck Dr.	4.74	0.5	2.37	2.37						Equip. Op.II	4.94	0.1	0.49	0.49	Truck Dr.	4.74	0.1	0.47	0.47	3.33
Animal Carcasses	Anim. Caretkr.	3.51	0.75	2.63	2.63						Truck Dr.	4.74	0.75	3.56	3.56						6.19
Food Waste (Grindable)	Fd.Srv.Wk	3.42	10.0	34.20	34.20																34 20
					$1365.36					$13.34					$101.63					$37.91	$1518.14

Reproduced from best available copy.

NUMERICAL RATING OF HOSPITAL SOLID WASTE SYSTEMS

JOHN WESLEY HOSPITAL

SYSTEM 1

Type of Waste		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	40	0	50		20	0	110	12	50		20	12	70	0	50	3	10	5	20	8	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	20	340
	Safety	10	40	0	50		10	10	100	0	45		10	0	55	0	45	1	5	2	10	3	60	0	[illegible]	0	75	0	[illegible]	13	300
	Security	0	30	0	5		25	0	60	0	5		25	0	30	0	5	0	25	0	10	0	40	0	[illegible]	0	60	0	75	0	200
	Esthetics	0	5	0	5		5	0	15	0	5		5	0	10	0	5	2	5	1	5	3	15	0	5	0	[illegible]	0	[illegible]	3	65
Surgical, Pathological & Animals	Sanitation	5	20	8	35	15	35	28	90	15	20	5	15	20	35		10		15		[illegible]		[illegible]		[illegible]		75		[illegible]	48	[illegible]
	Safety	0	5	0	10	2	5	2	20	2	5	2	10	4	15		15		10		5		[illegible]		[illegible]		5		[illegible]	6	75
	Security	0	5	0	5	15	35	15	45	0	5	5	35	5	40		5		20		5		30		10		75		[illegible]	20	[illegible]
	Esthetics	2	10	2	5	5	15	9	30	2	5	0	15	2	20		5		15		10		[illegible]		5		15		[illegible]	11	[illegible]
Soiled Linen	Sanitation	30	40	35	50		30	65	120	20	40		90	20	130	0	30	7	[illegible]	10	40	17	[illegible]		15		40		[illegible]	102	[illegible]
	Safety	2	5	0	5		5	2	15	0	5		5	0	10	0	10	1	5	0	15	1	[illegible]		5		15		[illegible]	3	[illegible]
	Security	2	5	0	5		5	2	15	0	5		15	0	20	0	15	0	20	0	5	0	[illegible]		15		5		[illegible]	2	[illegible]
	Esthetics	15	20	10	15		10	25	45	0	10		10	0	20	0	5	2	5	0	5	2	15		5		15		[illegible]	27	[illegible]
Rubbish	Sanitation	2	5	2	10		10	4	25	5	20		15	5	35	0	10	2	10	4	15	6	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	15	[illegible]
	Safety	5	15	5	20		25	10	60	0	20		45	0	65	0	15	6	25	6	25	12	[illegible]	0	10	0	25	0	35	22	[illegible]
	Security	2	5	0	5		20	2	30	0	5		15	0	20	0	5	0	15	0	10	0	[illegible]	0	15	0	30	0	45	2	[illegible]
	Esthetics	5	15	5	15		10	10	40	0	10		10	0	20	0	5	1	5	1	5	2	15	0	10	0	15	0	25	12	[illegible]
Reusable Patient Items	Sanitation		15	5	20	5	25	10	60		15		15		30		20		10		15		45		10		15		25	10	[illegible]
	Safety		15	5	20	0	5	5	40		15		5		20		15		5		15		35		10		15		25	5	120
	Security		15	0	5	0	15	0	35		5		15		20		10		15		15		40		10		15		25	0	[illegible]
	Esthetics		5	2	5	2	5	4	15		5		5		10		5		5		5		15		5		5		10	4	[illegible]
Non-Combustible	Sanitation	2	5	2	10		10	4	25	4	15		5	4	20	0	5	1	5	1	5	2	15	2	[illegible]	30	[illegible]	32	[illegible]	42	[illegible]
	Safety	5	20	3	15		20	8	55	0	15		20	0	35	0	10	2	10	2	10	4	30	0	5	13	25	13	30	25	[illegible]
	Security	5	10	0	5		15	5	30	0	5		10	0	15	0	5	0	10	0	5	0	20	0	5	15	15	15	20	20	85
	Esthetics	2	10	2	5		5	4	20	0	5		5	0	10	0	5	1	5	1	5	2	15	2	5	2	5	4	10	10	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	2	5		15	4	25	1	5		15	1	20	0	5	1	5	4	15	5	[illegible]	0	10	0	15	0	25	10	95
	Safety	2	5	2	5		5	4	15	0	5		5	0	10	0	5	1	5	1	5	2	15	0	5	0	10	0	15	6	[illegible]
	Security	0	5	0	5		5	0	15	0	5		5	0	10	0	5	0	5	0	5	0	15	0	5	0	5	0	10	0	[illegible]
	Esthetics	4	15	1	5		10	5	30	0	5		10	0	15	0	5	2	10	1	5	3	20	0	15	0	20	0	35	8	100
Food Service Items	Sanitation	2	5	2	5		10	4	20	2	5	5	10	7	15	1	5		5	0	15	1	25		[illegible]		15		[illegible]	12	[illegible]
	Safety	5	10	0	10		10	5	30	1	5	2	10	3	15	1	5		5	0	10	1	20		5		10		15	9	[illegible]
	Security	0	5	0	5		5	0	15	0	5	2	5	2	10	0	5		5	0	5	0	15		5		5		10	2	[illegible]
	Esthetics	2	5	2	5		5	4	15	2	5	2	5	4	10	2	5		5	0	5	2	15		5		5		10	10	[illegible]
Total	Sanitation	43	135	56	185	20	155	119	475	59	210	10	165	69	375	1	135	14	85	24	165	39	[illegible]	2	[illegible]	30	[illegible]	32	[illegible]	259	[illegible]
	Safety	29	115	15	135	2	85	46	335	3	115	4	110	7	225	1	120	11	70	11	95	23	[illegible]	0	55	13	[illegible]	13	[illegible]	89	[illegible]
	Security	9	80	0	40	15	125	24	245	0	40	7	125	7	165	0	55	0	115	0	40	0	[illegible]	0	75	15	210	15	[illegible]	46	[illegible]
	Esthetics	30	85	24	60	7	65	61	210	4	50	2	65	6	115	2	40	8	55	4	45	14	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	85	[illegible]
TOTAL		111	415	95	420	44	430	250	1265	66	415	23	465	89	880	4	350	33	325	39	365	76	1040	4	275	60	840	64	1115	479	[illegible]

SYSTEM 2

Type of Waste		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	40	0	50		20	0	110	12	50		20	12	70	0	50	3	10	1	[illegible]	16	[illegible]		[illegible]		[illegible]		[illegible]	28	340
	Safety	10	40	0	50		10	10	100	0	45		10	0	55	0	45	1	5	6	10	7	[illegible]		[illegible]		75		85	[illegible]	300
	Security	0	30	0	5		25	0	60	0	5		25	0	30	0	5	0	25	0	10	0	[illegible]		[illegible]		60		70	0	200
	Esthetics	0	5	0	5		5	0	15	0	5		5	0	10	0	5	2	5	7	5	9	[illegible]		5		[illegible]		[illegible]	[illegible]	65
Surgical, Pathological & Animals	Sanitation	5	20	8	35	15	35	28	90	15	20	5	15	20	35		10		[illegible]		40		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	48	[illegible]
	Safety	0	5	0	10	2	5	2	20	2	5	2	10	4	15		15		10		5		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	6	75
	Security	0	5	0	5	15	35	15	45	0	5	5	35	5	40		5		20		5		[illegible]	0	10	0	[illegible]	0	[illegible]	20	[illegible]
	Esthetics	2	10	2	5	5	15	9	30	2	5	0	15	2	20		5		[illegible]		10		[illegible]	0	5	0	15	0	[illegible]	11	[illegible]
Soiled Linen	Sanitation	30	40	35	50		30	65	120	20	40		90	20	130	0	30	7	[illegible]	10	[illegible]	17	[illegible]		[illegible]		40		[illegible]	102	[illegible]
	Safety	2	5	0	5		5	2	15	0	5		5	0	10	0	10	1	5	0	15	1	[illegible]		[illegible]		15		[illegible]	3	[illegible]
	Security	2	5	0	5		5	2	15	0	5		15	0	20	0	15	0	20	0	5	0	[illegible]		[illegible]		[illegible]		[illegible]	2	[illegible]
	Esthetics	15	20	10	15		10	25	45	0	10		10	0	20	0	5	2	5	0	5	2	[illegible]		[illegible]		15		[illegible]	27	100
Rubbish	Sanitation	2	5	2	10		10	4	25	5	20		15	5	35	0	10	2	10	8	15	10	[illegible]		[illegible]		[illegible]		[illegible]	[illegible]	[illegible]
	Safety	5	15	5	20		25	10	60	0	20		45	0	65	0	15	6	25	12	25	18	[illegible]		[illegible]		[illegible]		[illegible]	28	[illegible]
	Security	2	5	0	5		20	2	30	0	5		15	0	20	0	5	0	15	0	10	0	[illegible]		15		[illegible]		45	2	125
	Esthetics	5	15	5	15		10	10	40	0	10		10	0	20	0	5	1	5	5	5	6	[illegible]		10		[illegible]		[illegible]	[illegible]	[illegible]
Reusable Patient Items	Sanitation		15	5	20	5	25	10	60		15		15		30		20		10		15		[illegible]		10		15		25	10	[illegible]
	Safety		15	5	20	0	5	5	40		15		5		20		15		5		15		[illegible]		10		15		25	5	120
	Security		15	0	5	0	15	0	35		5		15		20		10		15		15		[illegible]		10		15		25	0	[illegible]
	Esthetics		5	2	5	2	5	4	15		5		5		10		5		5		5		[illegible]		5		5		10	4	[illegible]
Non-Combustible	Sanitation	2	5	2	10		10	4	25	4	15		5	4	20	0	5	1	5	3	5	4	[illegible]	2	[illegible]	15	[illegible]	17	[illegible]	20	[illegible]
	Safety	5	20	3	15		20	8	55	0	15		20	0	35	0	10	2	10	5	10	7	[illegible]	2	5	6	25	8	30	23	[illegible]
	Security	5	10	0	5		15	5	30	0	5		10	0	15	0	5	0	10	0	5	0	[illegible]	0	5	0	15	0	20	5	85
	Esthetics	2	10	2	5		5	4	20	0	5		5	0	10	0	5	1	5	5	5	6	[illegible]	1	5	1	5	2	10	12	55
Garbage (Non-Grindable)	Sanitation	2	5	2	5		15	4	25	1	5		15	1	20	0	5	1	5	8	15	9	[illegible]		[illegible]		15		[illegible]	14	95
	Safety	2	5	2	5		5	4	15	0	5		5	0	10	0	5	1	5	3	5	4	[illegible]		5		10		15	8	55
	Security	0	5	0	5		5	0	15	0	5		5	0	10	0	5	0	5	0	5	0	[illegible]		5		5		10	0	[illegible]
	Esthetics	4	15	1	5		10	5	30	0	5		10	0	15	0	5	2	10	5	5	7	[illegible]		15		[illegible]		35	12	[illegible]
Food Service Items	Sanitation	2	5	2	5		10	4	20	2	5	5	10	7	15	1	5		5	0	15	1	[illegible]		5		[illegible]		[illegible]	12	[illegible]
	Safety	5	10	0	10		10	5	30	1	5	2	10	3	15	1	5		5	0	10	1	[illegible]		5		10		15	9	[illegible]
	Security	0	5	0	5		5	0	15	0	5	2	5	2	10	0	5		5	0	5	0	[illegible]		5		5		10	2	[illegible]
	Esthetics	2	5	2	5		5	4	15	2	5	2	5	4	10	2	5		5	0	5	2	[illegible]		5		5		10	10	[illegible]
Total	Sanitation	43	135	56	185	20	155	119	475	59	210	10	165	69	375	1	135	14	85	42	165	57	[illegible]	2	[illegible]	15	[illegible]	17	[illegible]	262	[illegible]
	Safety	29	115	15	135	2	85	46	335	3	115	4	110	7	225	1	120	11	70	26	95	38	[illegible]	2	55	6	[illegible]	8	[illegible]	[illegible]	[illegible]
	Security	9	80	0	40	15	125	24	245	0	40	7	125	7	165	0	55	0	115	0	40	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	31	[illegible]
	Esthetics	30	85	24	60	7	65	61	210	4	50	2	65	6	115	2	40	8	55	22	45	32	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	101	[illegible]
TOTAL		111	415	95	420	44	430	250	1265	66	415	23	465	89	880	4	350	33	325	90	365	127	1040	5	275	22	840	27	1115	493	[illegible]

Reproduced from best available copy.

NUMERICAL RATING OF HOSPITAL SOLID WASTE SYSTEMS

JOHN WESLEY HOSPITAL

SYSTEMS 3

		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
Type of Waste		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	40	0	50		20	0	110	12	50		20	12	70	0	50	3	10	5	20	8	80	0	[illegible]	0	[illegible]	0	[illegible]	20	[illegible]
	Safety	10	40	0	50		10	10	100	0	45		10	0	55	0	45	1	5	2	10	3	60	0	[illegible]	20	[illegible]	20	[illegible]	33	[illegible]
	Security	0	30	0	5		25	0	60	0	5		25	0	30	0	5	0	25	0	10	0	40	0	[illegible]	60	[illegible]	60	[illegible]	60	[illegible]
	Esthetics	0	5	0	5		5	0	15	0	5		5	0	10	0	5	2	5	1	5	3	15	0	5	0	[illegible]	0	[illegible]	3	[illegible]
Surgical, Patho-logical & Animals	Sanitation	5	20	8	35	15	35	28	90	15	20	5	15	20	35		10		10		40		60		20		[illegible]		[illegible]	48	[illegible]
	Safety	0	5	0	10	2	5	2	20	2	5	2	10	4	15		15		10		5		30		5		[illegible]		[illegible]	6	[illegible]
	Security	0	5	0	5	15	35	15	45	0	5	5	35	5	40		5		20		5		30		10		25		[illegible]	20	[illegible]
	Esthetics	2	10	2	5	5	15	9	30	2	5	0	15	2	20		5		15		10		30		5		15		[illegible]	11	[illegible]
Soiled Linen	Sanitation	30	40	35	50		30	65	120	20	80		50	20	130	0	30	7	30	10	40	17	100		[illegible]		[illegible]		[illegible]	102	[illegible]
	Safety	2	5	0	5		5	2	15	0	5		5	0	10	0	10	1	5	0	15	1	30		[illegible]		15		[illegible]	3	[illegible]
	Security	2	5	0	5		5	2	15	0	5		15	0	20	0	15	0	20	0	5	0	40		[illegible]		[illegible]		[illegible]	2	[illegible]
	Esthetics	15	20	10	15		10	25	45	0	10		10	0	20	0	5	2	5	0	5	2	15		[illegible]		15		[illegible]	27	[illegible]
Rubbish	Sanitation	2	5	2	10		10	4	25	5	20		15	5	35	0	10	2	10	4	15	6	35	0	[illegible]	0	[illegible]	0	[illegible]	15	[illegible]
	Safety	5	15	5	20		25	10	60	0	20		45	0	65	0	15	6	25	6	25	12	65	0	10	0	[illegible]	0	[illegible]	22	[illegible]
	Security	2	5	0	5		20	2	30	0	5		15	0	20	0	5	0	15	0	10	0	30	0	15	30	[illegible]	30	[illegible]	32	[illegible]
	Esthetics	5	15	5	15		10	10	40	0	10		10	0	20	0	5	1	5	1	5	2	15	0	[illegible]	0	[illegible]	0	[illegible]	12	[illegible]
Reusable Patient Items	Sanitation		15	5	20	5	25	10	60		15		15		30		20		10		15		45		10		15		25	10	[illegible]
	Safety		15	5	20	0	5	5	40		15		5		20		15		5		15		35		10		15		25	5	[illegible]
	Security		15	0	5	0	15	0	35		5		15		20		10		15		15		40		10		15		[illegible]	0	[illegible]
	Esthetics		5	2	5	2	5	4	15		5		5		10		5		5		5		15		5		5		[illegible]	4	[illegible]
Non-Combustible	Sanitation	2	5	2	10		10	4	25	4	15		5	4	20	0	5	1	5	1	5	2	15	2	[illegible]	30	[illegible]	32	[illegible]	42	[illegible]
	Safety	5	20	3	15		20	8	55	0	15		20	0	35	0	10	2	10	2	10	4	30	1	5	6	25	7	[illegible]	19	[illegible]
	Security	5	10	0	5		15	5	30	0	5		10	0	15	0	5	0	10	0	5	0	20	0	5	15	15	15	[illegible]	20	[illegible]
	Esthetics	2	10	2	5		5	4	20	0	5		5	0	10	0	5	1	5	1	5	2	15	2	5	2	[illegible]	4	[illegible]	10	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	2	5		15	4	25	1	5		15	1	20	0	5	1	5	4	15	5	25	0	[illegible]	0	[illegible]	0	[illegible]	10	[illegible]
	Safety	2	5	2	5		5	4	15	0	5		5	0	10	0	5	1	5	1	5	2	15	0	5	0	[illegible]	0	[illegible]	6	[illegible]
	Security	0	5	0	5		5	0	15	0	5		5	0	10	0	5	0	5	0	5	0	15	0	5	5	[illegible]	5	[illegible]	5	[illegible]
	Esthetics	4	15	1	5		10	5	30	0	5		10	0	15	0	5	2	10	1	5	3	20	4	10	0	[illegible]	4	[illegible]	12	[illegible]
Food Service Items	Sanitation	2	5	2	5		10	4	20	2	5	5	10	7	15	1	5		5	0	15	1	25		5		[illegible]		[illegible]	12	[illegible]
	Safety	5	10	0	10		10	5	30	1	5	2	10	3	15	1	5		5	0	10	1	20		5		10		15	9	[illegible]
	Security	0	5	0	5		5	0	15	0	5	2	5	2	10	0	[illegible]		5	0	5	0	15		5		5		10	2	[illegible]
	Esthetics	2	5	2	5		5	4	15	2	5	2	5	4	10	2	5		5	0	5	2	15		5		5		10	10	[illegible]
Total	Sanitation	43	135	56	185	20	155	119	475	59	210	10	165	69	375	1	135	14	85	24	165	39	385	2	[illegible]	30	[illegible]	32	[illegible]	259	[illegible]
	Safety	29	115	15	135	2	85	46	335	3	115	4	110	7	225	1	120	11	70	11	95	23	285	1	[illegible]	26	[illegible]	27	[illegible]	103	[illegible]
	Security	9	80	0	40	15	125	24	245	0	40	7	125	7	165	0	55	0	115	0	60	0	230	0	[illegible]	110	[illegible]	110	[illegible]	141	[illegible]
	Esthetics	30	85	24	60	7	65	61	210	4	50	2	65	6	115	2	40	8	55	4	45	14	140	6	[illegible]	2	[illegible]	8	[illegible]	89	[illegible]
TOTAL		111	415	95	420	44	420	250	1265	66	415	23	465	89	880	4	350	33	325	39	365	76	1040	9	275	168	840	177	1115	592	[illegible]

SYSTEM 4

		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
Type of Waste		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	40	0	50		20	0	110	12	50		20	12	70	0	50	3	10	5	20	8	80	5	[illegible]	40	[illegible]	45	[illegible]	65	[illegible]
	Safety	10	40	0	50		10	10	100	0	45		10	0	55	0	45	1	5	2	10	3	60	2	[illegible]	38	[illegible]	40	[illegible]	53	[illegible]
	Security	0	30	0	5		25	0	60	0	5		25	0	30	0	5	0	25	0	10	0	40	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	0	5	0	5		5	0	15	0	5		5	0	10	0	5	2	5	1	5	3	15	1	5	5	[illegible]	6	[illegible]	9	[illegible]
Surgical, Patho-logical & Animals	Sanitation	5	20	8	35	15	35	28	90	15	20	5	15	20	35		10		10		40		60		[illegible]		[illegible]		[illegible]	48	[illegible]
	Safety	0	5	0	10	2	5	2	20	2	5	2	10	4	15		15		10		5		30		5		[illegible]		[illegible]	6	[illegible]
	Security	0	5	0	5	15	35	15	45	0	5	5	35	5	40		5		20		5		30		10		25		[illegible]	20	[illegible]
	Esthetics	2	10	2	5	5	15	9	30	2	5	0	15	2	20		5		15		10		30		5		15		[illegible]	11	[illegible]
Soiled Linen	Sanitation	30	40	35	50		30	65	120	20	80		50	20	130	0	30	7	30	10	40	17	100		[illegible]		[illegible]		[illegible]	102	[illegible]
	Safety	2	5	0	5		5	2	15	0	5		5	0	10	0	10	1	5	0	15	1	30		[illegible]		[illegible]		[illegible]	3	[illegible]
	Security	2	5	0	5		5	2	15	0	5		15	0	20	0	15	0	20	0	5	0	40		[illegible]		[illegible]		[illegible]	2	[illegible]
	Esthetics	15	20	10	15		10	25	45	0	10		10	0	20	0	5	2	5	0	5	2	15		[illegible]		[illegible]		[illegible]	27	[illegible]
Rubbish	Sanitation	2	5	2	10		10	4	25	5	20		15	5	35	0	10	2	10	4	15	6	35	2	[illegible]	28	[illegible]	30	[illegible]	45	[illegible]
	Safety	5	15	5	20		25	10	60	0	20		45	0	65	0	15	6	25	6	25	12	65	2	[illegible]	12	[illegible]	14	[illegible]	36	[illegible]
	Security	2	5	0	5		20	2	30	0	5		15	0	20	0	5	0	15	0	10	0	30	0	15	0	[illegible]	0	45	2	125
	Esthetics	5	15	5	15		10	10	40	0	10		10	0	20	0	5	1	5	1	5	2	15	2	[illegible]	4	[illegible]	6	[illegible]	18	[illegible]
Reusable Patient Items	Sanitation		15	5	20	5	25	10	60		15		15		30		20		10		15		45		10		15		25	10	[illegible]
	Safety		15	5	20	0	5	5	40		15		5		20		15		5		15		35		10		15		25	5	[illegible]
	Security		15	0	5	0	15	0	35		5		15		20		10		15		15		40		[illegible]		15		[illegible]	0	[illegible]
	Esthetics		5	2	5	2	5	4	15		5		5		10		5		5		5		15		[illegible]		5		[illegible]	4	[illegible]
Non-Combustible	Sanitation	2	5	2	10		10	4	25	4	15		5	4	20	0	5	1	5	1	5	2	15	2	[illegible]	30	[illegible]	32	[illegible]	42	[illegible]
	Safety	5	20	3	15		20	8	55	0	15		20	0	35	0	10	2	10	2	10	4	30	0	5	13	25	13	30	25	[illegible]
	Security	5	10	0	5		15	5	30	0	5		10	0	15	0	5	0	10	0	5	0	20	0	5	15	15	15	[illegible]	20	[illegible]
	Esthetics	2	10	2	5		5	4	20	0	5		5	0	10	0	5	1	5	1	5	2	15	2	[illegible]	2	[illegible]	4	[illegible]	10	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	2	5		15	4	25	1	5		15	1	20	0	5	1	5	4	15	5	25	2	10	8	15	10	25	20	95
	Safety	2	5	2	5		5	4	15	0	5		5	0	10	0	5	1	5	1	5	2	15	1	5	5	10	6	15	12	[illegible]
	Security	0	5	0	5		5	0	15	0	5		5	0	10	0	5	0	5	0	5	0	15	0	5	0	5	0	10	0	[illegible]
	Esthetics	4	15	1	5		10	5	30	0	5		10	0	15	0	5	2	10	1	5	3	20	4	15	4	[illegible]	8	[illegible]	16	[illegible]
Food Service Items	Sanitation	2	5	2	5		10	4	20	2	5	5	10	7	15	1	5		5	0	15	1	25		[illegible]		[illegible]		[illegible]	12	[illegible]
	Safety	5	10	0	10		10	5	30	1	5	2	10	3	15	1	5		5	0	10	1	20		5		10		15	9	[illegible]
	Security	0	5	0	5		5	0	15	0	5	2	5	2	10	0	5		5	0	5	0	15		5		5		10	2	[illegible]
	Esthetics	2	5	2	5		5	4	15	2	5	2	5	4	10	2	5		5	0	5	2	15		5		5		10	10	[illegible]
Total	Sanitation	43	135	56	185	20	155	119	475	59	210	10	165	69	375	1	135	14	85	24	165	39	385	11	[illegible]	106	[illegible]	117	[illegible]	344	[illegible]
	Safety	29	115	15	135	2	85	46	335	3	115	4	110	7	225	1	120	11	70	11	95	23	285	5	[illegible]	68	[illegible]	73	[illegible]	149	[illegible]
	Security	9	80	0	40	15	125	24	245	0	40	7	125	7	165	0	55	0	115	0	60	0	230	0	[illegible]	15	[illegible]	15	[illegible]	46	[illegible]
	Esthetics	30	85	24	60	7	65	61	210	4	50	2	65	6	115	2	40	8	55	4	45	14	140	9	[illegible]	15	[illegible]	24	[illegible]	105	[illegible]
TOTAL		111	415	95	420	44	420	250	1265	66	415	23	465	89	880	4	350	33	325	39	365	76	1040	25	275	204	840	229	1115	644	[illegible]

ESTIMATED DAILY LABOR COSTS OF HOSPITAL SOLID WASTE SYSTEMS

JOHN WESLEY HOSPITAL

SYSTEMS 1, 4 & 5

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	6.0	$ 34.32	$ 34.32						Engin. Op.I	$5.28	0.1	$ 0.53	$ 0.53						$ 34.85
Pathological and Surgical	Lab Tech.	4.12	7.5	30.90	30.90	Lab Tech.	$4.12	0.25	$ 1.03	$ 1.03											31.93
Soiled Linen	Nurse	5.72	25.0	143.00	143.00						Engin. Op.I	5.28	6.0	31.68	31.68						174.68
Rubbish	Custodian	3.71	40.0	148.40	148.40						Engin. Op.I	5.28	1.4	7.39	7.39						155.79
Reusable Patient Items	Attendant	3.33	4.0	13.32	13.32																13.32
Non-Combustible	Custodian	3.71	4.0	14.84	14.84						Engin. Op.I	5.28	0.2	1.06	1.06	Truck Dr.	$4.74	1.0	$4.74	$4.74	20.64
Garbage (Non-Grindable)	Fd.Srv.Wk	3.42	4.0	13.68	13.68						Engin. Op.I	5.28	0.3	1.58	1.58						15.26
Food Service Items	Attendant Fd.Srv.Wk	3.34 3.42	35.0 8.0	116.90 26.36	143.26	Fd.Srv.Wk	3.42	8.0	26.36	26.36											169.62
Radiological																					
Ash & Residue																					
Animal Carcasses	Lab Tech.	4.12	0.1	0.41	0.41	Lab Tech.	4.12	0.1	0.41	0.41	Lab Tech. Inst. Lab.	4.12 4.03	0.2 0.1	0.82 0.40	1.22						2.04
Food Waste (Grindable)	Fd.Srv.Wk	3.42	3.0	10.26	10.26																10.26
					$552.39					$27.80					$43.46					$4.74	$628.39

SYSTEM 2

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	6.0	$ 34.32	$ 34.32						Inc. Op.	$5.78	0.1	$ 0.58	$ 0.58						$ 34.90
Pathological and Surgical	Lab Tech.	4.12	7.5	30.90	30.90	Lab Tech.	$4.12	0.25	$ 1.03	$ 1.03											31.93
Soiled Linen	Nurse	5.72	25.0	143.00	143.00						Inc. Op.	5.78	1.0	5.78	5.78						148.78
Rubbish	Custodian	3.71	40.0	148.40	148.40						Inc. Op.	5.78	4.2	24.28	24.28						172.68
Reusable Patient Items	Attendant	3.33	4.0	13.32	13.32																13.32
Non-Combustible	Custodian	3.71	4.0	14.84	14.84						Inc. Op.	5.78	0.6	3.47	3.47	Truck Dr.	$4.74	0.5	$2.37	$2.37	20.68
Garbage (Non-Grindable)	Fd.Srv.Wk	3.42	4.0	13.68	13.68						Inc. Op.	5.78	1.2	6.94	6.94						20.62
Food Service Items	Attendant Fd.Srv.Wk	3.34 3.42	35.0 8.0	116.90 26.36	143.26	Fd.Srv.Wk	3.42	8.0	26.36	26.36											169.62
Radiological																					
Ash & Residue											Inc. Op.	5.78	1.0	5.78	5.78	Truck Dr.	4.74	0.5	2.37	2.37	8.15
Animal Carcasses	Lab Tech.	4.12	0.1	0.41	0.41	Lab Tech.	4.12	0.1	0.41	0.41											0.82
Food Waste (Grindable)	Fd.Srv.Wk	3.42	3.0	10.26	10.26																10.26
					$552.39					$27.80					$46.83					$4.74	$631.76

ESTIMATED DAILY LABOR COSTS OF HOSPITAL SOLID WASTE SYSTEMS
SYSTEMS 3, 5 & 7

JOHN WESLEY HOSPITAL

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	6.0	$ 34.32	$ 34.32						Equip. Op.I	$5.28	0.1	$ 0.53	$ 0.53	Truck Dr.	$4.74	0.1	$ 0.47	$ 0.47	$ 35.32
Pathological and Surgical	Lab Tech.	4.12	7.5	30.90	30.90	Lab Tech.	$4.12	0.25	$ 1.03	$ 1.03											31.93
Soiled Linen	Nurse	5.72	25.0	143.00	143.00						Equip. Op.I	5.28	6.0	31.68	31.68						174.68
Rubbish	Custodian	3.71	40.0	148.40	148.40						Equip. Op.I	5.28	1.4	7.39	7.39	Truck Dr.	4.74	3.0	14.22	14.22	170.01
Reusable Patient Items	Attendant	3.34	4.0	13.32	13.32																13.32
Non-Combustible	Custodian	3.71	4.0	14.84	14.84						Equip. Op.I	5.28	0.2	1.06	1.06	Truck Dr.	4.74	0.3	1.42	1.42	17.32
Garbage (Non-Grindable)	Fd. Srv. Wk	3.42	4.0	13.68	13.68						Equip. Op.I	5.28	0.3	1.58	1.58	Truck Dr.	4.74	0.6	2.84	2.84	18.10
Food Service Items	Attendant Fd. Srv. Wk	3.34 3.42	35.0 8.0	116.90 26.36	143.26	Fd. Srv. Wk	3.42	8.0	26.36	26.36											169.62
Radiological																					
Ash & Residue																					
Animal Carcasses	Lab Tech.	4.12	0.1	0.41	0.41	Lab Tech.	4.12	0.1	0.41	0.41	Lab Tech. Inst. Lab.	4.12 4.03	0.2 0.1	0.82 0.40	1.22						2.04
Food Waste (Grindable)	Fd. Srv. Wk	3.42	3.0	10.26	10.26																10.26
					$552.39					$27.80					$43.46					$10.95	$642.60

SYSTEM 8

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	6.0	$ 34.32	$ 34.32						Equip. Op.II	$4.94	0.1	$ 0.49	$ 0.49	Truck Dr.	$4.74	0.05	$0.24	$0.24	$ 35.05
Pathological and Surgical	Lab Tech.	4.12	7.5	30.90	30.90	Lab Tech.	$4.12	0.25	$ 1.03	$ 1.03											31.93
Soiled Linen	Nurse	5.72	25.0	143.00	143.00						Equip. Op.II	4.94	2.9	14.33	14.33						157.33
Rubbish	Custodian	3.71	40.0	148.40	148.40						Equip. Op.II	4.94	0.7	3.46	3.46	Truck Dr.	4.74	0.85	4.03	4.03	155.89
Reusable Patient Items	Attendant	3.34	4.0	13.32	13.32																13.32
Non-Combustible	Custodian	3.71	4.0	14.84	14.84						Equip. Op.II	4.94	0.1	0.49	0.49	Truck Dr.	4.74	0.05	0.24	0.24	15.57
Garbage (Non-Grindable)	Fd. Srv. Wk	3.42	4.0	13.68	13.68						Equip. Op.II	4.94	0.2	0.99	0.99	Truck Dr.	4.74	0.05	0.24	0.26	14.91
Food Service Items	Attendant Fd. Srv. Wk	3.34 3.42	35.0 8.0	116.90 26.36	143.26	Fd. Srv. Wk	3.42	8.0	26.36	26.36											169.62
Radiological																					
Ash & Residue																					
Animal Carcasses	Lab Tech.	4.12	0.1	0.41	0.41	Lab Tech.	4.12	0.1	0.41	0.41	Lab Tech. Inst. Lab.	4.12 4.03	0.2 0.1	0.82 0.40	1.22						2.04
Food Waste (Grindable)	Fd. Srv. Wk	3.42	3.0	10.26	10.26																10.26
					$552.39					$27.80					$30.98					$4.75	$605.92

ESTIMATED DAILY LABOR COSTS OF HOSPITAL SOLID WASTE SYSTEMS

SYSTEM 9

JOHN WESLEY HOSPITAL

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	6.0	$ 34.32	$ 34.32						Equip. Op.II	$4.94	0.1	$ 0.49	$ 0.49	Truck Dr.	$4.74	0.1	$ 0.47	$ 0.47	$ 35.28
Pathological and Surgical	Lab Tech.	4.12	7.5	30.90	30.90	Lab Tech.	$4.12	0.25	$ 1.03	$ 1.03											31.93
Soiled Linen	Nurse	5.72	25.0	143.00	143.00						Equip. Op.II	4.94	2.9	14.33	14.33						157.33
Rubbish	Custodian	3.71	40.0	148.40	148.40						Equip. Op.II	4.94	0.7	3.46	3.46	Truck Dr.	4.74	3.0	14.92	14.92	166.78
Reusable Patient Items	Attendant	3.34	4.0	13.32	13.32																13.32
Non-Combustible	Custodian	3.71	4.0	14.84	14.84						Equip. Op.II	4.94	0.1	0.49	0.49	Truck Dr.	4.74	0.3	1.42	1.42	16.75
Garbage (Non-Grindable)	Fd.Srv.Wk	3.42	4.0	13.68	13.68						Equip. Op.II	4.94	0.2	0.99	0.99	Truck Dr.	4.74	0.6	2.84	2.84	17.51
Food Service Items	Attendant Fd.Srv.Wk	3.34 3.42	35.0 8.0	116.90 26.36	143.26	Fd.Srv.Wk	3.42	8.0	26.36	26.36											169.62
Radiological																					
Ash & Residue																					
Animal Carcasses	Lab Tech.	4.12	0.1	0.41	0.41	Lab Tech.	4.12	0.1	0.41	0.41	Lab Tech. Inst. Lab.	4.12 4.03	0.2 0.1	0.82 0.40	1.22						2.04
Food Waste (Grindable)	Fd.Srv.Wk	3.42	3.0	10.26	10.26																10.26
					$552.3					$27.80					$20.98					$19.65	$670.82

Reproduced from best available copy.

NUMERICAL RATING OF HOSPITAL SOLID WASTE SYSTEMS

OLIVE VIEW HOSPITAL

SYSTEM 1

		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
Type of Waste		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	40	0	50		20	0	110		50		20		70	0	50	3	10	5	20	8	80	0	20	0	80	0	100	8	360
	Safety	10	40	0	50		10	10	100		45		10		55	0	45	1	5	2	10	3	60	0	10	0	75	0	85	13	300
	Security	0	30	0	5		25	0	60		5		25		30	0	5	0	25	0	10	0	40	0	10	0	60	0	70	0	200
	Esthetics	0	5	0	5		5	0	15		5		5		10	0	5	2	5	1	5	3	15	0	5	0	20	0	25	3	65
Surgical, Pathological & Animals	Sanitation	5	20	5	35	0	35	10	90		20		35		55	5	10	5	10	0	40	10	60		20		[illegible]		[illegible]	20	[illegible]
	Safety	2	5	5	10	0	5	7	20		5		10		15	5	15	0	10	0	5	5	30		5		[illegible]		[illegible]	12	75
	Security	1	5	0	5	0	35	1	45		5		35		40	0	5	0	20	0	5	0	30		10		75		[illegible]	1	200
	Esthetics	5	10	2	5	0	15	7	30		5		15		20	2	5	5	15	0	10	7	30		5		15		[illegible]	14	[illegible]
Soiled Linen	Sanitation	30	40	35	50		30	65	120		80		50		130	0	30	7	25	0	40	7	95		[illegible]		[illegible]		[illegible]	72	[illegible]
	Safety	2	5	2	5		5	4	15		5		5		10	0	10	1	5	0	15	1	30		5		5		[illegible]	5	[illegible]
	Security	0	5	0	5		5	0	15		5		15		20	0	15	0	20	0	5	0	40		15		[illegible]		[illegible]	0	[illegible]
	Esthetics	15	20	5	15		10	20	45		10		10		20	0	5	2	5	0	5	2	15		[illegible]		15		20	22	100
Rubbish	Sanitation	2	5	2	10		10	4	25		20		15		35	0	10	2	10	4	15	6	35	0	10	0	[illegible]	0	[illegible]	10	[illegible]
	Safety	7	15	5	20		25	12	60		20		45		65	0	15	6	25	6	25	12	65	0	10	0	[illegible]	0	[illegible]	24	[illegible]
	Security	2	5	0	5		20	2	30		5		15		20	0	5	0	15	0	10	0	30	0	15	0	[illegible]	0	45	2	125
	Esthetics	7	15	5	15		10	12	40		10		10		20	0	5	1	5	1	5	2	15	0	[illegible]	0	15	0	[illegible]	14	[illegible]
Reusable Patient Items	Sanitation	10	15	5	20	15	25	30	60		15		15		30	10	20	0	10	0	15	10	45		[illegible]		15		[illegible]	40	[illegible]
	Safety	5	15	5	20	2	5	12	40		15		5		20	3	15	0	5	0	15	3	35		15		[illegible]		[illegible]	15	[illegible]
	Security	0	15	0	5	5	15	5	35		5		15		20	0	10	0	15	0	15	0	40		10		15		[illegible]	5	[illegible]
	Esthetics	5	5	2	5	2	5	9	15		5		5		10	2	5	0	5	0	5	2	15		5		5		[illegible]	11	[illegible]
Non-Combustible	Sanitation	2	5	2	10		10	4	25		15		5		20	0	5	1	5	1	5	2	15	2	[illegible]	30	[illegible]	32	[illegible]	[illegible]	[illegible]
	Safety	10	20	5	15		20	15	55		15		20		35	0	10	2	10	2	10	4	30	0	5	13	25	13	30	32	150
	Security	5	10	0	5		15	5	30		5		10		15	0	5	0	10	0	5	0	20	0	5	15	15	15	20	20	85
	Esthetics	5	10	2	5		5	7	20		5		5		10	0	5	1	5	1	5	2	15	2	[illegible]	2	[illegible]	4	[illegible]	13	55
Garbage (Non-Grindable)	Sanitation	2	5	2	5		15	4	25		5		15		20	0	5	1	5	4	15	5	25	0	[illegible]	0	[illegible]	0	[illegible]	9	95
	Safety	2	5	2	5		5	4	15		5		5		10	0	5	1	5	1	5	2	15	0	[illegible]	0	[illegible]	0	15	6	[illegible]
	Security	0	5	0	5		5	0	15		5		5		10	0	5	0	5	0	5	0	15	0	5	0	[illegible]	0	[illegible]	0	50
	Esthetics	4	15	1	5		10	5	30		5		10		15	0	5	2	10	1	5	3	20	0	15	0	[illegible]	0	[illegible]	8	100
Food Service Items	Sanitation	0	5	0	5	2	10	2	20		5		10		15	2	5	0	5	0	15	2	25		[illegible]		[illegible]		[illegible]	4	[illegible]
	Safety	0	10	2	10	0	10	2	30		5		10		15	2	5	2	5	0	10	4	20		5		10		15	6	[illegible]
	Security	0	5	0	5	0	5	0	15		5		5		10	0	5	0	5	0	5	0	15		5		5		10	0	[illegible]
	Esthetics	0	5	2	5	2	5	4	15		5		5		10	2	5	2	5	0	5	4	15		5		5		10	8	50
Total	Sanitation	51	135	51	185	17	155	119	475		210		165		375	17	135	19	85	14	165	50	385	2	[illegible]	30	[illegible]	32	[illegible]	201	1675
	Safety	38	115	26	135	2	85	66	335		115		110		225	10	120	13	70	11	95	34	285	0	[illegible]	13	[illegible]	13	[illegible]	113	[illegible]
	Security	8	80	0	40	5	125	13	245		40		125		165	0	55	0	115	0	60	0	230	0	[illegible]	15	[illegible]	15	[illegible]	28	925
	Esthetics	41	85	19	60	4	65	64	210		50		65		115	6	40	15	55	4	45	25	140	2	[illegible]	2	[illegible]	4	[illegible]	93	[illegible]
TOTAL		138	415	96	420	28	430	262	1265		415		465		880	33	350	47	325	29	365	109	1040	4	275	60	840	64	1115	435	4300

SYSTEM 2

		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
Type of Waste		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	40	0	50		20	0	110		50		20		70	0	50	3	10	10	20	13	80		20		80		100	13	360
	Safety	10	40	0	50		10	10	100		45		10		55	0	45	1	5	5	10	6	60		10		75		85	16	300
	Security	0	30	0	5		25	0	60		5		25		30	0	5	0	25	0	10	0	40		10		60		70	0	200
	Esthetics	0	5	0	5		5	0	15		5		5		10	0	5	2	5	5	5	7	15		5		20		25	7	65
Surgical, Pathological & Animals	Sanitation	5	20	5	35	0	35	10	90		20		35		55	5	10	5	10	0	40	10	60		20		[illegible]		[illegible]	20	[illegible]
	Safety	2	5	5	10	0	5	7	20		5		10		15	5	15	0	10	0	5	5	30		5		[illegible]		[illegible]	12	75
	Security	1	5	0	5	0	35	1	45		5		35		40	0	5	0	20	0	5	0	30		10		75		[illegible]	1	200
	Esthetics	5	10	2	5	0	15	7	30		5		15		20	2	5	5	15	0	10	7	30		5		15		[illegible]	14	[illegible]
Soiled Linen	Sanitation	30	40	35	50		30	65	120		80		50		130	0	30	7	25	0	40	7	95		[illegible]		[illegible]		[illegible]	72	[illegible]
	Safety	2	5	2	5		5	4	15		5		5		10	0	10	1	5	0	15	1	30		5		5		[illegible]	5	[illegible]
	Security	0	5	0	5		5	0	15		5		15		20	0	15	0	20	0	5	0	40		15		[illegible]		[illegible]	0	[illegible]
	Esthetics	15	20	5	15		10	20	45		10		10		20	0	5	2	5	0	5	2	15		[illegible]		15		20	22	100
Rubbish	Sanitation	2	5	2	10		10	4	25		20		15		35	0	10	2	10	8	15	10	35		10		[illegible]		[illegible]	14	[illegible]
	Safety	7	15	5	20		25	12	60		20		45		65	0	15	6	25	12	25	18	65		10		[illegible]		[illegible]	30	[illegible]
	Security	2	5	0	5		20	2	30		5		15		20	0	5	0	15	0	10	0	30		15		[illegible]		45	2	125
	Esthetics	7	15	5	15		10	12	40		10		10		20	0	5	1	5	5	5	6	15		[illegible]		15		[illegible]	18	[illegible]
Reusable Patient Items	Sanitation	10	15	5	20	15	25	30	60		15		15		30	10	20	0	10	0	15	10	45		[illegible]		15		[illegible]	40	[illegible]
	Safety	5	15	5	20	2	5	12	40		15		5		20	3	15	0	5	0	15	3	35		15		[illegible]		[illegible]	15	[illegible]
	Security	0	15	0	5	5	15	5	35		5		15		20	0	10	0	15	0	15	0	40		10		15		[illegible]	5	[illegible]
	Esthetics	5	5	2	5	2	5	9	15		5		5		10	2	5	0	5	0	5	2	15		5		5		[illegible]	11	[illegible]
Non-Combustible	Sanitation	2	5	2	10		10	4	25		15		5		20	0	5	1	5	3	5	4	15	2	[illegible]	15	[illegible]	17	[illegible]	[illegible]	[illegible]
	Safety	10	20	5	15		20	15	55		15		20		35	0	10	2	10	5	10	7	30	2	5	6	25	8	30	30	150
	Security	5	10	0	5		15	5	30		5		10		15	0	5	0	10	0	5	0	20	0	5	0	15	0	20	5	85
	Esthetics	5	10	2	5		5	7	20		5		5		10	0	5	1	5	5	5	6	15	1	[illegible]	1	[illegible]	2	[illegible]	15	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	2	5		15	4	25		5		15		20	0	5	1	5	8	15	9	25		[illegible]		[illegible]		[illegible]	13	95
	Safety	2	5	2	5		5	4	15		5		5		10	0	5	1	5	3	5	4	15		[illegible]		10		15	8	[illegible]
	Security	0	5	0	5		5	0	15		5		5		10	0	5	0	5	0	5	0	15		5		[illegible]		[illegible]	0	50
	Esthetics	4	15	1	5		10	5	30		5		10		15	0	5	2	10	5	5	7	20		15		[illegible]		[illegible]	12	[illegible]
Food Service Items	Sanitation	0	5	0	5	2	10	2	20		5		10		15	2	5	0	5	0	15	2	25		[illegible]		[illegible]		[illegible]	4	[illegible]
	Safety	0	10	2	10	0	10	2	30		5		10		15	2	5	2	5	0	10	4	20		5		10		15	6	[illegible]
	Security	0	5	0	5	0	5	0	15		5		5		10	0	5	0	5	0	5	0	15		5		5		10	0	[illegible]
	Esthetics	0	5	2	5	2	5	4	15		5		5		10	2	5	2	5	0	5	4	15		5		5		10	8	50
Total	Sanitation	51	135	51	185	17	155	119	475		210		165		375	17	135	19	85	29	165	65	385	2	[illegible]	15	[illegible]	17	[illegible]	201	1675
	Safety	38	115	26	135	2	85	66	335		115		110		225	10	120	13	70	25	95	48	285	2	[illegible]	6	[illegible]	8	[illegible]	122	[illegible]
	Security	8	80	0	40	5	125	13	245		40		125		165	0	55	0	115	0	60	0	230	0	[illegible]	0	[illegible]	0	[illegible]	13	925
	Esthetics	41	85	19	60	4	65	64	210		50		65		115	6	40	15	55	20	45	41	140	1	[illegible]	1	[illegible]	2	[illegible]	107	[illegible]
TOTAL		138	415	96	420	28	430	262	1265		415		465		880	33	350	47	325	74	365	154	1040	5	275	22	840	27	1115	443	4300

Reproduced from best available copy.

NUMERICAL RATING OF HOSPITAL SOLID WASTE SYSTEMS

SYSTEMS 3

OLIVE VIEW HOSPITAL

Type of Waste		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def Value	Max. Value	Def. Value	Max Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	40	0	50	–	20	0	110		50		20		70	0	50	3	10	5	20	8	80	0	[illegible]	0	[illegible]	0	[illegible]	8	[illegible]
	Safety	10	40	0	50		10	10	100		45		10		55	0	45	1	5	2	10	3	60	0	[illegible]	20	[illegible]	20	[illegible]	33	[illegible]
	Security	0	30	0	5		25	0	60		5		25		30	0	5	0	25	0	10	0	40	0	[illegible]	60	[illegible]	60	70	60	[illegible]
	Esthetics	0	5	0	5		5	0	15		5		5		10	0	5	2	5	1	5	3	15	0	5	0	[illegible]	0	[illegible]	3	[illegible]
Surgical, Patho-logical & Animals	Sanitation	5	20	5	35	0	35	10	90		20		15		35	5	10	5	10	0	40	10	[illegible]		[illegible]		[illegible]		[illegible]	20	[illegible]
	Safety	2	5	5	10	0	5	7	20		5		10		15	5	15	0	10	0	5	5	[illegible]		[illegible]		[illegible]		[illegible]	12	[illegible]
	Security	1	5	0	5	0	35	1	45		5		35		40	0	5	0	20	0	5	0	[illegible]		[illegible]		[illegible]		[illegible]	1	[illegible]
	Esthetics	5	10	2	5	0	15	7	30		5		15		20	2	5	5	[illegible]	0	10	7	[illegible]		[illegible]		[illegible]		[illegible]	14	[illegible]
Soiled Linen	Sanitation	30	40	35	50		30	65	120		[illegible]		[illegible]		[illegible]	0	[illegible]	7	[illegible]	0	40	7	[illegible]		[illegible]		[illegible]		[illegible]	[illegible]	[illegible]
	Safety	2	5	2	5		5	4	15		5		5		10	0	10	1	[illegible]	0	15	1	[illegible]		[illegible]		[illegible]		[illegible]	5	[illegible]
	Security	0	5	0	5		5	0	15		5		15		20	0	15	0	[illegible]	0	5	0	[illegible]		[illegible]		[illegible]		[illegible]	0	[illegible]
	Esthetics	15	20	5	15		10	20	45		10		10		20	0	5	2	5	0	5	2	15		[illegible]		[illegible]		[illegible]	22	[illegible]
Rubbish	Sanitation	2	5	2	10		10	4	25		20		15		35	0	10	2	[illegible]	4	15	6	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	10	[illegible]
	Safety	7	15	5	20		25	12	60		20		45		65	0	15	6	25	6	25	12	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	24	[illegible]
	Security	2	5	0	5		20	2	30		5		15		20	0	5	0	15	0	10	0	[illegible]	0	[illegible]	30	[illegible]	30	[illegible]	32	[illegible]
	Esthetics	7	15	5	15		10	12	40		10		10		20	0	5	1	5	1	5	2	15	0	[illegible]	0	[illegible]	0	[illegible]	14	[illegible]
Reusable Patient Items	Sanitation	10	15	5	20	15	25	30	60		15		15		30	10	20	0	10	0	15	10	[illegible]		[illegible]		[illegible]		[illegible]	40	[illegible]
	Safety	5	15	5	20	2	5	12	40		15		5		20	3	15	0	5	0	15	3	[illegible]		[illegible]		[illegible]		[illegible]	15	[illegible]
	Security	0	15	0	5	5	15	5	35		5		15		20	0	10	0	15	0	15	0	[illegible]		[illegible]		[illegible]		[illegible]	5	[illegible]
	Esthetics	5	5	2	5	2	5	9	15		5		5		10	2	5	0	5	0	5	2	15		[illegible]		[illegible]		[illegible]	11	[illegible]
Non-Combustible	Sanitation	2	5	2	10		10	4	25		15		5		20	0	5	1	5	1	5	2	15	2	[illegible]	30	[illegible]	32	[illegible]	[illegible]	[illegible]
	Safety	10	20	5	15		20	15	55		15		20		35	0	10	2	10	2	10	4	30	1	5	6	[illegible]	7	[illegible]	26	[illegible]
	Security	5	10	0	5		15	5	30		5		10		15	0	5	0	10	0	5	0	20	0	[illegible]	15	[illegible]	15	[illegible]	20	[illegible]
	Esthetics	5	10	2	5		5	7	20		5		5		10	0	5	1	5	1	5	2	15	2	5	2	[illegible]	4	[illegible]	15	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	2	5		15	4	25		5		15		20	0	5	1	5	4	15	5	25	0	[illegible]	0	[illegible]	0	[illegible]	9	[illegible]
	Safety	2	5	2	5		5	4	15		5		5		10	0	5	1	5	1	5	2	15	0	5	0	[illegible]	0	[illegible]	6	[illegible]
	Security	0	5	0	5		5	0	15		5		5		10	0	5	0	5	0	5	0	15	0	5	5	[illegible]	5	[illegible]	5	[illegible]
	Esthetics	4	15	1	5		10	5	30		5		10		15	0	5	2	10	1	5	3	20	4	[illegible]	0	[illegible]	4	[illegible]	12	[illegible]
Food Service Items	Sanitation	0	5	0	5	2	10	2	20		5		10		15	2	5	0	5	0	15	2	[illegible]		[illegible]		[illegible]		[illegible]	4	[illegible]
	Safety	0	10	2	10	0	10	2	30		5		10		15	2	5	2	5	0	10	4	20		5		10		15	6	[illegible]
	Security	0	5	0	5	0	5	0	15		5		5		10	0	5	0	5	0	5	0	15		5		5		[illegible]	0	[illegible]
	Esthetics	0	5	2	5	2	5	4	15		5		5		10	2	5	2	5	0	5	4	15		5		[illegible]		[illegible]	8	[illegible]
Total	Sanitation	51	155	51	165	17	155	119	475		210		165		375	17	125	19	85	14	165	50	[illegible]	2	[illegible]	30	[illegible]	32	[illegible]	201	[illegible]
	Safety	38	115	26	135	2	85	66	335		115		110		225	10	120	13	70	11	95	34	[illegible]	1	[illegible]	26	[illegible]	27	[illegible]	127	[illegible]
	Security	8	80	0	40	5	125	13	245		40		125		165	0	55	0	115	0	40	0	[illegible]	0	[illegible]	110	[illegible]	110	[illegible]	123	[illegible]
	Esthetics	41	85	19	60	4	65	64	210		50		65		115	6	40	15	55	4	45	25	[illegible]	6	[illegible]	2	[illegible]	8	[illegible]	97	[illegible]
TOTAL		138	415	96	420	28	430	262	1265		415		465		880	33	350	47	325	29	365	109	1040	9	275	168	840	177	1115	548	[illegible]

SYSTEM 4

Type of Waste		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def Value Total	Max. Value Total	Internal Transfer		Central storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	40	0	50		20	0	110		50		20		70	0	50	3	10	5	20	8	80	5	[illegible]	40	[illegible]	45	[illegible]	53	[illegible]
	Safety	10	40	0	50		10	10	100		45		10		55	0	45	1	5	2	10	3	60	2	[illegible]	38	[illegible]	40	[illegible]	53	[illegible]
	Security	0	30	0	5		25	0	60		5		25		30	0	5	0	25	0	10	0	40	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	0	5	0	5		5	0	15		5		5		10	0	5	2	5	1	5	3	15	1	[illegible]	5	[illegible]	6	[illegible]	9	[illegible]
Surgical, Patho-logical & Animals	Sanitation	5	20	5	35	0	35	10	90		20		15		35	5	10	5	[illegible]	0	40	10	[illegible]		[illegible]		[illegible]		[illegible]	20	[illegible]
	Safety	2	5	5	10	0	5	7	20		5		10		15	5	15	0	10	0	5	5	[illegible]		[illegible]		[illegible]		[illegible]	12	[illegible]
	Security	1	5	0	5	0	35	1	45		5		35		40	0	5	0	20	0	5	0	[illegible]		[illegible]		[illegible]		[illegible]	1	[illegible]
	Esthetics	5	10	2	5	0	15	7	30		5		15		20	2	5	5	[illegible]	0	10	7	[illegible]		[illegible]		[illegible]		[illegible]	14	[illegible]
Soiled Linen	Sanitation	30	40	35	50		30	65	120		[illegible]		[illegible]		[illegible]	0	[illegible]	7	[illegible]	0	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	[illegible]	[illegible]
	Safety	2	5	2	5		5	4	15		5		5		10	0	10	1	[illegible]	0	15	1	[illegible]		[illegible]		[illegible]		[illegible]	5	[illegible]
	Security	0	5	0	5		5	0	15		5		15		20	0	15	0	[illegible]	0	5	0	[illegible]		[illegible]		[illegible]		[illegible]	0	[illegible]
	Esthetics	15	20	5	15		10	20	45		10		10		20	0	5	2	5	0	5	2	15		[illegible]		[illegible]		[illegible]	22	[illegible]
Rubbish	Sanitation	2	5	2	10		10	4	25		20		15		35	0	10	2	[illegible]	4	15	6	[illegible]	2	[illegible]	28	[illegible]	30	[illegible]	40	[illegible]
	Safety	7	15	5	20		25	12	60		20		45		65	0	15	6	25	6	25	12	[illegible]	2	[illegible]	12	[illegible]	14	[illegible]	38	[illegible]
	Security	2	5	0	5		20	2	30		5		15		20	0	5	0	15	0	10	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	2	[illegible]
	Esthetics	7	15	5	15		10	12	40		10		10		20	0	5	1	5	1	5	2	15	2	[illegible]	4	[illegible]	6	[illegible]	20	[illegible]
Reusable Patient Items	Sanitation	10	15	5	20	15	25	30	60		15		15		30	10	20	0	10	0	15	10	[illegible]		[illegible]		[illegible]		[illegible]	40	[illegible]
	Safety	5	15	5	20	2	5	12	40		15		5		20	3	15	0	5	0	15	3	[illegible]		[illegible]		[illegible]		[illegible]	15	[illegible]
	Security	0	15	0	5	5	15	5	35		5		15		20	0	10	0	15	0	15	0	[illegible]		[illegible]		[illegible]		[illegible]	5	[illegible]
	Esthetics	5	5	2	5	2	5	9	15		5		5		10	2	5	0	5	0	5	2	15		[illegible]		[illegible]		[illegible]	11	[illegible]
Non-Combustible	Sanitation	2	5	2	10		10	4	25		15		5		20	0	5	1	5	1	5	2	15	2	[illegible]	30	[illegible]	32	[illegible]	38	[illegible]
	Safety	10	20	5	15		20	15	55		15		20		35	0	10	2	10	2	10	4	30	0	5	13	[illegible]	13	[illegible]	32	[illegible]
	Security	5	10	0	5		15	5	30		5		10		15	0	5	0	10	0	5	0	20	0	[illegible]	15	[illegible]	15	[illegible]	20	[illegible]
	Esthetics	5	10	2	5		5	7	20		5		5		10	0	5	1	5	1	5	2	15	2	[illegible]	2	[illegible]	4	[illegible]	13	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	2	5		15	4	25		5		15		20	0	5	1	5	4	15	5	25	2	[illegible]	8	[illegible]	10	[illegible]	19	[illegible]
	Safety	2	5	2	5		5	4	15		5		5		10	0	5	1	5	1	5	2	15	1	[illegible]	5	[illegible]	6	[illegible]	12	[illegible]
	Security	0	5	0	5		5	0	15		5		5		10	0	5	0	5	0	5	0	15	0	5	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	4	15	1	5		10	5	30		5		10		15	0	5	2	10	1	5	3	20	4	[illegible]	4	[illegible]	8	[illegible]	16	[illegible]
Food Service Items	Sanitation	0	5	0	5	2	10	2	20		5		10		15	2	5	0	5	0	15	2	[illegible]		[illegible]		[illegible]		[illegible]	4	[illegible]
	Safety	0	10	2	10	0	10	2	30		5		10		15	2	5	2	5	0	10	4	20		5		10		15	6	[illegible]
	Security	0	5	0	5	0	5	0	15		5		5		10	0	5	0	5	0	5	0	15		5		5		[illegible]	0	[illegible]
	Esthetics	0	5	2	5	2	5	4	15		5		5		10	2	5	2	5	0	5	4	15		5		[illegible]		[illegible]	8	[illegible]
Total	Sanitation	51	155	51	165	17	155	119	475		210		165		375	17	125	19	85	14	165	50	[illegible]	11	[illegible]	106	[illegible]	117	[illegible]	286	[illegible]
	Safety	38	115	26	135	2	85	66	335		115		110		225	10	120	13	70	11	95	34	[illegible]	5	[illegible]	68	[illegible]	73	[illegible]	173	[illegible]
	Security	8	80	0	40	5	125	13	245		40		125		165	0	55	0	115	0	40	0	[illegible]	0	[illegible]	15	[illegible]	15	[illegible]	28	[illegible]
	Esthetics	41	85	19	60	4	65	64	210		50		65		115	6	40	15	55	4	45	25	[illegible]	9	[illegible]	15	[illegible]	24	[illegible]	113	[illegible]
TOTAL		138	415	96	420	28	430	262	1265		415		465		880	33	350	47	325	29	365	109	1040	25	275	204	840	229	1115	600	[illegible]

ESTIMATED DAILY LABOR COSTS OF HOSPITAL SOLID WASTE SYSTEMS
SYSTEMS 1, 4 & 5

OLIVE VIEW HOSPITAL

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	4.0	$ 22.88	$ 22.88						Equip.Op. Equip. Op.II	$5.28 4.94	0.1 0.1	$ 0.53 0.49	$ 1.02						$ 23.90
Pathological and Surgical	Nurse	5.72	0.5	2.86	2.86	Lab Tech.	$4.12	1.0	$ 4.12	$ 4.12											6.98
Soiled Linen	Attendant	3.34	140.0	467.60	467.60						Equip. Op.II	4.94	5.4	26.86	26.86						494.46
Rubbish	Attendant Custodian	3.34 3.71	72.0 150.0	240.48 556.50	796.98						Equip.Op.I Equip. Op.II	5.28 4.94	5.5 1.7	29.04 8.40	37.44						834.42
Reusable Patient Items	Attendant	3.34	5.0	16.70	16.70																16.70
Non-Combustible	Custodian	3.71	2.0	7.42	7.42						Equip.Op.I Equip. Op.II	5.28 4.94	0.8 0.2	4.22 0.98	5.20	Truck Dr.	$4.74	1.0	$4.74	$4.74	17.36
Garbage (Non-Grindable)	Fd.Srv.Wkr	3.42	4.0	13.68	13.68						Equip.Op.I Equip. Op.II	5.28 4.94	1.6 0.5	8.45 2.47	10.92						24.60
Food Service Items	Fd.Srv.Wkr	3.42	84.0	287.28	287.28	Fd.Srv.Wkr	3.42	6.0	20.52	20.52	Fd.Srv.Wkr	3.42	1.5	5.13	5.13						312.93
Radiological	Lab Tech.	4.12	0.25	1.03	1.03	Lab Tech.	4.12	0.25	1.03	1.03											2.06
Ash & Residue	Animal Caretkr.	3.51	0.5	1.76	1.76						Equip. Op.II	4.94	0.1	0.49	0.49						2.25
Animal Carcasses	Animal Caretkr.	3.51	0.5	1.76	1.76	Animal Caretkr.	3.51	0.25	0.88	0.88											2.64
Food Waste (Grindable)	Fd.Srv.Wkr	3.42	16.0	54.72	54.72																54.72
					$1674.62					$26.55					$87.06					$4.74	$1793.02

SYSTEM 2

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	4.0	$ 22.88	$ 22.88						Equip. Op.II Inc. Op.	$4.94 5.78	0.1 0.1	$ 0.49 0.58	$ 1.07						$ 23.95
Pathological and Surgical	Nurse	5.72	0.5	2.86	2.86	Lab Tech.	$4.12	1.0	$ 4.12	$ 4.12											6.98
Soiled Linen	Attendant	3.34	140.0	467.60	467.60						Equip. Op.II	4.94	5.4	26.68	26.68						494.28
Rubbish	Attendant Custodian	3.34 3.71	72.0 150.0	240.48 556.50	796.98						Equip. Op.II Inc. Op.	4.94 5.78	1.8 4.8	8.89 27.74	36.63						833.61
Reusable Patient Items	Attendant	3.34	5.0	16.70	16.70																16.70
Non-Combustible	Custodian	3.71	2.0	7.42	7.42						Equip. Op.II Inc. Op.	4.94 5.78	0.8 0.7	3.95 4.05	8.00	Truck Dr.	$4.74	0.5	$2.37	$2.37	17.79
Garbage (Non-Grindable)	Fd.Srv.Wkr	3.42	4.0	13.68	13.68						Equip. Op.II Inc. Op.	4.94 5.78	0.5 1.3	2.47 7.51	9.98						23.66
Food Service Items	Fd.Srv.Wkr	3.42	84.0	287.28	287.28	Fd.Srv.Wkr	3.42	6.0	20.52	20.52	Fd.Srv.Wkr	3.42	1.5	5.13	5.13						312.93
Radiological	Lab Tech.	4.12	0.25	1.03	1.03	Lab Tech.	4.12	0.25	1.03	1.03											2.06
Ash & Residue	Animal Caretkr.	3.51	0.5	1.76	1.76						Inc. Op.	5.78	1.0	5.78	5.78	Truck Dr.	4.74	0.5	2.37	2.37	9.91
Animal Carcasses	Animal Caretkr.	3.51	0.5	1.76	1.76	Animal Caretkr.	3.51	0.25	0.88	0.88											2.64
Food Waste (Grindable)	Fd.Srv.Wkr	3.42	16.0	54.72	54.72																54.72
					$1674.62					$26.55					$93.27					$4.74	$1799.23

ESTIMATED DAILY LABOR COSTS OF HOSPITAL SOLID WASTE SYSTEMS

SYSTEMS 3, 6 & 7

OLIVE VIEW HOSPITAL

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	4.0	$ 22.88	$ 22.88						Equip.Op.I Equip. Op.II	$5.28 4.94	0.1 0.1	$ 0.53 0.49	$ 1.02	Truck Dr.	$4.74	0.1	$ 0.47	$ 0.47	$ 24.37
Pathological and Surgical	Nurse	5.72	0.5	2.86	2.86	Lab Tech.	$4.12	1.0	$ 4.12	$ 4.12											6.98
Soiled Linen	Attendant	3.34	140.0	467.60	467.60						Equip. Op.II	4.94	5.4	26.86	26.86						494.46
Rubbish	Attendant Custodian	3.34 3.71	72.0 150.0	240.48 556.50	796.98						Equip.Op.I Equip. Op.II	5.28 4.94	5.5 1.7	29.04 8.40	37.44	Truck Dr.	4.74	5.5	26.07	26.07	860.49
Reusable Patient Items	Attendant	3.34	5.0	16.70	16.70																16.70
Non-Combustible	Custodian	3.71	2.0	7.42	7.42						Equip.Op.I Equip. Op.II	5.28 4.94	0.8 0.2	4.22 0.98	5.20	Truck Dr.	4.74	0.8	3.79	3.79	16.41
Garbage (Non-Grindable)	Fd.Srv.Wk	3.42	4.0	13.68	13.68						Equip.Op.I Equip. Op.II	5.28 4.94	1.6 0.5	8.45 2.47	10.92	Truck Dr.	4.74	1.5	7.11	7.11	31.71
Food Service Items	Fd.Srv.Wk	3.42	84.0	287.28	287.28	Fd.Srv.Wk	3.42	6.0	20.52	20.52	Fd.Srv.Wk	3.42	1.5	5.13	5.13						312.93
Radiological	Lab Tech.	4.12	0.25	1.03	1.03	Lab Tech.	4.12	0.25	1.03	1.03											2.06
Ash & Residue	Animal Caretkr.	3.51	0.5	1.76	1.76						Equip. Op.II	4.94	0.1	0.49	0.49	Truck Dr.	4.74	0.1	0.47	0.47	2.72
Animal Carcasses	Animal Caretkr.	3.51	0.5	1.76	1.76	Animal Caretkr.	3.51	0.25	0.88	0.88											2.64
Food Waste (Grindable)	Fd.Srv.Wk	3.42	16.0	54.72	54.72																54.72
					$1674.67					$26.55					$87.06					$37.91	$1826.19

SYSTEM 8

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	4.0	$ 22.88	22.88						Equip. Op.II	$4.94	0.1	$ 0.49	$ 0.49	Truck Dr.	$4.74	0.05	$0.24	$0.24	$ 23.61
Pathological and Surgical	Nurse	5.72	0.5	2.86	2.86	Lab Tech.	$4.12	1.0	$ 4.12	$ 4.12											6.98
Soiled Linen	Attendant	3.34	140.0	467.60	467.60						Equip. Op.II	4.94	5.4	26.86	26.86						494.46
Rubbish	Attendant Custodian	3.34 3.71	72.0 150.0	240.48 556.50	796.98						Equip. Op.II	4.94	1.7	8.40	8.40	Truck Dr.	4.74	0.8	3.79	3.79	809.17
Reusable Patient Items	Attendant	3.34	5.0	16.70	16.70																16.70
Non-Combustible	Custodian	3.71	2.0	7.42	7.42						Equip. Op.II	4.94	0.2	0.98	0.98	Truck Dr.	4.74	0.05	0.24	0.24	8.64
Garbage (Non-Grindable)	Fd.Srv.Wk	3.42	4.0	13.68	13.68						Equip. Op.II	4.94	0.5	2.47	2.47	Truck Dr.	4.74	0.05	0.24	0.24	16.39
Food Service Items	Fd.Srv.Wk	3.42	84.0	287.28	287.28	Fd.Srv.Wk	3.42	6.0	20.52	20.52	Fd.Srv.Wk	3.42	1.5	5.13	5.13						312.93
Radiological	Lab Tech.	4.12	0.25	1.03	1.03	Lab Tech.	4.12	0.25	1.03	1.03											2.06
Ash & Residue	Animal Caretkr.	3.51	0.5	1.76	1.76						Equip. Op.II	4.94	0.1	0.49	0.49	Truck Dr.	4.74	0.05	0.24	0.24	2.49
Animal Carcasses	Animal Caretkr.	3.51	0.5	1.76	1.76	Animal Caretkr.	3.51	0.25	0.88	0.88											2.64
Food Waste (Grindable)	Fd.Srv.Wk	3.42	16.0	54.72	54.72																54.72
					$1674.63					$26.55					$44.82					$4.75	$1750.79

ESTIMATED DAILY LABOR COSTS OF HOSPITAL SOLID WASTE SYSTEMS

SYSTEM 9

OLIVE VIEW HOSPITAL

Types of Waste	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					TOTAL
	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	
Sharps, Needles, Etc.	Nurse	$5.72	4.0	$ 22.88	$ 22.8						Equip. Op.II	$4.94	0.1	$ 0.49	$ 0.49	Truck Dr.	$4.74	0.1	$ 0.47	$ 0.47	$ 23.84
Pathological and Surgical	Nurse	5.72	0.5	2.86	2.8	Lab Tech.	$4.12	1.0	$ 4.12	$ 4.12											6.98
Soiled Linen	Attendant	3.34	140.0	467.60	467.6						Equip. Op.II	4.94	5.4	26.86	26.86						494.46
Rubbish	Attendant Custodian	3.34 3.71	72.0 150.0	240.48 556.50	796.9						Equip. Op.II	4.94	1.7	8.40	8.40	Truck Dr.	4.74	6.6	31.28	31.28	836.66
Reusable Patient Items	Attendant	3.34	5.0	16.70	16.7																16.70
Non-Combustible	Custodian	3.71	2.0	7.42	7.4						Equip. Op.II	4.94	0.2	0.98	0.98	Truck Dr.	4.74	0.6	2.84	2.84	11.24
Garbage (Non-Grindable)	Fd.Srv.Wk	3.42	4.0	13.68	13.6						Equip. Op.II	4.94	0.5	2.47	2.47	Truck Dr.	4.74	0.6	2.84	2.84	18.99
Food Service Items	Fd.Srv.Wk	3.42	84.0	287.28	287.2	Fd.Srv.Wk	3.42	6.0	20.52	20.52	Fd.Srv.Wk	3.42	1.5	5.13	5.13						312.93
Radiological	Lab Tech.	4.12	0.25	1.03	1.0	Lab Tech.	4.12	0.25	1.03	1.03											2.06
Ash & Residue	Animal Caretkr.	3.51	0.5	1.76	1.7						Equip. Op.II	4.94	0.1	0.49	0.49	Truck Dr.	4.74	0.1	0.47	0.47	2.72
Animal Carcasses	Animal Caretkr.	3.51	0.5	1.76	1.7	Animal Caretkr.	3.51	0.25	0.88	0.88											2.64
Food Waste(Grindable)	Fd.Srv.Wk	3.42	16.0	54.72	54.7																54.72
					$1674.6					$26.55					$44.82					$37.90	$1783.94

Reproduced from
best available copy.

NUMERICAL RATING OF HOSPITAL SOLID WASTE SYSTEMS

MIRA LOMA HOSPITAL

SYSTEM 1

		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal				Vertical Transfer		Intermediate Storage, Processing, Disposal				Internal Transfer		Central Storage		Central Processing or Disposal				External Transfer		Final Processing and/or Disposal					
Type of Waste		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value Total	Max. Value Total	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value Total	Max. Value Total	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value Total	Max. Value Total	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
Sharps, Needles, Etc.	Sanitation	0	40	0	40		20	0	110		30		20		20	0	50	3	10	5	30	8	40	0	[illegible]	0	[illegible]	0	[illegible]	8	[illegible]
	Safety	10	40	0	50		10	10	100		45		10		55	0	40	1	5	2	10	3	40	0	[illegible]	0	[illegible]	0	[illegible]	13	[illegible]
	Security	0	30	0	5		25	0	60		5		25		30	0	5	0	25	0	10	0	40	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	0	5	0	5		5	0	15		5		5		10	0	5	2	5	1	5	3	15	0	[illegible]	0	[illegible]	0	[illegible]	3	[illegible]
Surgical, Pathological & Animals	Sanitation	5	20	5	15	0	15	10	50		20	0	35	0	55	0	[illegible]	0	[illegible]	0	5	0	[illegible]		[illegible]		[illegible]		[illegible]	10	[illegible]
	Safety	2	5	0	10	0	5	2	20		5	5	10	5	15	5	15	5	[illegible]	0	40	10	[illegible]		[illegible]		[illegible]		[illegible]	17	[illegible]
	Security	0	5	0	5	0	35	0	45		5	15	35	15	40	2	5	20	[illegible]	0	5	22	[illegible]		[illegible]		[illegible]		[illegible]	37	[illegible]
	Esthetics	2	10	2	5	10	15	14	30		5	12	15	12	20	2	5	7	[illegible]	0	5	9	[illegible]		[illegible]		[illegible]		[illegible]	35	[illegible]
Soiled Linen	Sanitation	30	40	10	40		30	40	120		40		90		130	0	[illegible]	7	[illegible]		[illegible]	7	[illegible]	2	[illegible]	0	[illegible]	2	[illegible]	49	[illegible]
	Safety	2	5	0	5		5	2	15		5		5		10	0	10	1	[illegible]		[illegible]	1	[illegible]	2	[illegible]	0	[illegible]	2	[illegible]	5	[illegible]
	Security	2	5	0	5		5	2	15		5		15		20	0	15	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	2	[illegible]
	Esthetics	15	20	5	15		10	20	45		10		10		20	0	5	2	[illegible]		[illegible]	2	[illegible]	2	[illegible]	0	[illegible]	2	[illegible]	24	[illegible]
Rubbish	Sanitation	2	5	5	10		10	7	25		20		15		35	0	10	2	[illegible]	4	[illegible]	6	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	13	[illegible]
	Safety	5	15	5	20		25	10	60		20		45		65	0	15	6	25	6	[illegible]	12	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	22	[illegible]
	Security	2	5	0	5		20	2	30		5		15		20	0	5	0	15	0	10	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	2	[illegible]
	Esthetics	7	15	5	15		10	12	40		10		10		20	0	5	1	[illegible]	1	[illegible]	2	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	14	[illegible]
Reusable Patient Items	Sanitation	10	15	5	20	7	25	22	60		15		15		30	5	20	5	30	0	15	10	[illegible]		[illegible]		[illegible]		[illegible]	32	[illegible]
	Safety	5	15	5	20	0	5	10	40		15		5		20	3	15	0	[illegible]	0	15	3	[illegible]		[illegible]		[illegible]		[illegible]	13	[illegible]
	Security	0	15	0	5	7	15	7	35		5		15		20	0	10	0	15	0	15	0	[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
	Esthetics	2	5	2	5	2	5	6	15		5		5		10	2	5	2	[illegible]	0	5	4	[illegible]		[illegible]		[illegible]		[illegible]	10	[illegible]
Non-Combustible	Sanitation	2	5	2	10		10	4	25		15		5		20	0	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	2	[illegible]	30	[illegible]	32	[illegible]	38	[illegible]
	Safety	5	20	3	15		20	8	55		15		20		35	0	10	2	10	2	10	4	[illegible]	0	[illegible]	13	[illegible]	13	[illegible]	25	[illegible]
	Security	5	10	0	5		15	5	30		5		10		15	0	5	0	30	0	5	0	[illegible]	0	[illegible]	15	[illegible]	15	[illegible]	20	[illegible]
	Esthetics	5	10	2	5		5	7	20		5		5		10	0	5	1	[illegible]	1	5	2	[illegible]	2	[illegible]	2	[illegible]	4	[illegible]	13	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	2	5		15	4	25		5		15		20	0	5	1	[illegible]	4	15	5	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	9	[illegible]
	Safety	2	5	2	5		5	4	15		5		5		10	0	5	1	5	1	5	2	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	6	[illegible]
	Security	0	5	0	5		5	0	15		5		5		10	0	5	0	5	0	5	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	4	15	1	5		10	5	30		5		10		15	0	5	2	10	1	5	3	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	8	[illegible]
Food Service Items	Sanitation	2	5	2	5	10	10	14	20		5		10		15		5		5		15		[illegible]	1	[illegible]	3	[illegible]	4	[illegible]	18	[illegible]
	Safety	5	10	0	10	5	10	10	30		5		10		15		5		5		10		[illegible]	1	[illegible]	0	[illegible]	1	[illegible]	11	[illegible]
	Security	0	5	0	5	5	5	5	15		5		5		10		5		5		5		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	5	[illegible]
	Esthetics	2	5	2	5	5	5	9	15		5		5		10		5		5		5		[illegible]	2	[illegible]	0	[illegible]	2	[illegible]	11	[illegible]
Total	Sanitation	53	135	31	185	17	155	101	475		210	0	165	0	375	5	135	19	85	14	145	38	[illegible]	5	[illegible]	33	[illegible]	38	[illegible]	177	[illegible]
	Safety	36	115	15	135	5	85	56	335		115	5	110	5	225	8	120	16	70	11	95	35	[illegible]	3	[illegible]	13	[illegible]	16	[illegible]	112	[illegible]
	Security	9	80	0	40	12	125	21	245		40	15	125	15	165	2	55	20	115	0	40	22	[illegible]	0	[illegible]	15	[illegible]	15	[illegible]	73	[illegible]
	Esthetics	37	85	19	60	17	65	73	210		50	12	65	12	115	4	40	17	55	4	85	25	[illegible]	6	[illegible]	2	[illegible]	8	[illegible]	118	[illegible]
TOTAL		135	415	65	420	51	430	251	1265		415	32	465	32	880	19	350	72	325	29	365	120	1040	14	275	63	840	77	1115	480	4300

SYSTEM 2

		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal				Vertical Transfer		Intermediate Storage, Processing, Disposal				Internal Transfer		Central Storage		Central Processing or Disposal				External Transfer		Final Processing and/or Disposal					
Type of Waste		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value Total	Max. Value Total	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value Total	Max. Value Total	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value Total	Max. Value Total	Def. Value	Max. Value	Def. Value	Max. Value	Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
Sharps, Needles, Etc.	Sanitation	0	40	0	40		20	0	110		30		20		20	0	30	3	10	10	30	13	[illegible]		[illegible]		[illegible]		[illegible]	13	[illegible]
	Safety	10	40	0	50		10	10	100		45		10		55	0	45	1	5	5	10	6	[illegible]		[illegible]		[illegible]		[illegible]	16	[illegible]
	Security	0	30	0	5		25	0	60		5		25		30	0	5	0	25	0	10	0	[illegible]		[illegible]		[illegible]		[illegible]	0	[illegible]
	Esthetics	0	5	0	5		5	0	15		5		5		10	0	5	2	5	5	5	7	[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
Surgical, Pathological & Animals	Sanitation	5	20	5	15	0	15	10	50		20	0	35	0	55	0	10	0	[illegible]	20	[illegible]	20	[illegible]		[illegible]		[illegible]		[illegible]	30	[illegible]
	Safety	2	5	0	10	0	5	2	20		5	5	10	5	15	5	15	5	[illegible]	3	[illegible]	13	[illegible]		[illegible]		[illegible]		[illegible]	20	[illegible]
	Security	0	5	0	5	0	35	0	45		5	15	35	15	40	2	5	20	[illegible]	0	[illegible]	22	[illegible]		[illegible]		[illegible]		[illegible]	37	[illegible]
	Esthetics	2	10	2	5	10	15	14	30		5	12	15	12	20	2	5	7	[illegible]	5	[illegible]	14	[illegible]		[illegible]		[illegible]		[illegible]	40	[illegible]
Soiled Linen	Sanitation	30	40	10	40		30	40	120		40		90		130	0	10	7	[illegible]		[illegible]	7	[illegible]	2	[illegible]	0	[illegible]	2	[illegible]	49	[illegible]
	Safety	2	5	0	5		5	2	15		5		5		10	0	10	1	[illegible]		15	1	[illegible]	2	[illegible]	0	[illegible]	2	[illegible]	5	[illegible]
	Security	2	5	0	5		5	2	15		5		15		20	0	15	0	[illegible]		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	2	[illegible]
	Esthetics	15	20	5	15		10	20	45		10		10		20	0	5	2	[illegible]		[illegible]	2	[illegible]	2	[illegible]	0	[illegible]	2	[illegible]	24	[illegible]
Rubbish	Sanitation	2	5	5	10		10	7	25		20		15		35	0	10	2	[illegible]	8	[illegible]	10	[illegible]		[illegible]		[illegible]		[illegible]	17	[illegible]
	Safety	5	15	5	20		25	10	60		20		45		65	0	15	6	25	12	[illegible]	18	[illegible]		[illegible]		[illegible]		[illegible]	28	[illegible]
	Security	2	5	0	5		20	2	30		5		15		20	0	5	0	15	0	10	0	[illegible]		[illegible]		[illegible]		[illegible]	2	[illegible]
	Esthetics	7	15	5	15		10	12	40		10		10		20	0	5	1	[illegible]	5	[illegible]	6	[illegible]		[illegible]		[illegible]		[illegible]	18	[illegible]
Reusable Patient Items	Sanitation	10	15	5	20	7	25	22	60		15		15		30	5	20	5	30	0	15	10	[illegible]		[illegible]		[illegible]		[illegible]	32	[illegible]
	Safety	5	15	5	20	0	5	10	40		15		5		20	3	15	0	[illegible]	0	15	3	[illegible]		[illegible]		[illegible]		[illegible]	13	[illegible]
	Security	0	15	0	5	7	15	7	35		5		15		20	0	10	0	15	0	15	0	[illegible]		[illegible]		[illegible]		[illegible]	7	[illegible]
	Esthetics	2	5	2	5	2	5	6	15		5		5		10	2	5	2	[illegible]	0	[illegible]	4	[illegible]		[illegible]		[illegible]		[illegible]	10	[illegible]
Non-Combustible	Sanitation	2	5	2	10		10	4	25		15		5		20	0	[illegible]	1	[illegible]	3	[illegible]	4	[illegible]	2	[illegible]	15	[illegible]	17	[illegible]	25	[illegible]
	Safety	5	20	3	15		20	8	55		15		20		35	0	10	2	10	5	10	7	[illegible]	2	[illegible]	6	[illegible]	8	[illegible]	23	[illegible]
	Security	5	10	0	5		15	5	30		5		10		15	0	5	0	30	0	5	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	5	[illegible]
	Esthetics	5	10	2	5		5	7	20		5		5		10	0	5	1	5	5	5	6	[illegible]	1	[illegible]	1	[illegible]	2	[illegible]	15	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	2	5		15	4	25		5		15		20	0	5	1	[illegible]	8	15	9	[illegible]		[illegible]		[illegible]		[illegible]	13	[illegible]
	Safety	2	5	2	5		5	4	15		5		5		10	0	5	1	5	3	5	4	[illegible]		[illegible]		[illegible]		[illegible]	8	[illegible]
	Security	0	5	0	5		5	0	15		5		5		10	0	5	0	5	0	5	0	[illegible]		[illegible]		[illegible]		[illegible]	0	[illegible]
	Esthetics	4	15	1	5		10	5	30		5		10		15	0	5	2	10	5	[illegible]	7	[illegible]		[illegible]		[illegible]		[illegible]	12	[illegible]
Food Service Items	Sanitation	2	5	2	5	10	10	14	20		5		10		15		5		5		15		[illegible]	1	[illegible]	3	[illegible]	4	[illegible]	18	[illegible]
	Safety	5	10	0	10	5	10	10	30		5		10		15		5		5		10		[illegible]	1	[illegible]	0	[illegible]	1	[illegible]	11	[illegible]
	Security	0	5	0	5	5	5	5	15		5		5		10		5		5		5		[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	5	[illegible]
	Esthetics	2	5	2	5	5	5	9	15		5		5		10		5		5		5		[illegible]	2	[illegible]	0	[illegible]	2	[illegible]	11	[illegible]
Total	Sanitation	53	135	31	185	17	155	101	475		210	0	165	0	375	5	135	19	85	49	145	73	[illegible]	5	[illegible]	18	[illegible]	23	[illegible]	197	[illegible]
	Safety	36	115	15	135	5	85	56	335		115	5	110	5	225	8	120	16	70	28	95	52	[illegible]	5	[illegible]	6	[illegible]	11	[illegible]	124	[illegible]
	Security	9	80	0	40	12	125	21	245		40	15	125	15	165	2	55	20	115	0	40	22	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]	58	[illegible]
	Esthetics	37	85	19	60	17	65	73	210		50	12	65	12	115	4	40	17	55	25	85	46	[illegible]	5	[illegible]	1	[illegible]	6	[illegible]	137	[illegible]
TOTAL		135	415	65	420	51	430	251	1265		415	32	465	32	880	19	350	72	325	102	365	193	1040	15	275	25	840	40	1115	516	4300

Reproduced from best available copy.

NUMERICAL RATING OF HOSPITAL SOLID WASTE SYSTEMS MIRA LOMA HOSPITAL

SYSTEMS 3

Type of Waste		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	40	0	50		20	0	110		50		20		70	0	30	3	10	5	20	8	60	0	[illegible]	0	[illegible]	0	[illegible]	8	[illegible]
	Safety	10	40	0	50		10	10	100		45		10		55	0	45	1	5	2	10	3	60	0	[illegible]	20	[illegible]	20	[illegible]	33	[illegible]
	Security	0	30	0	5		25	0	60		5		25		30	0	5	0	25	0	10	0	40	0	[illegible]	60	[illegible]	60	[illegible]	60	[illegible]
	Esthetics	0	5	0	5		5	0	15		5		5		10	0	5	2	5	1	5	3	15	0	[illegible]	0	[illegible]	0	[illegible]	3	45
Surgical, Pathological & Animals	Sanitation	5	20	5	35	0	35	10	90		20	0	35	0	55	0	10	0	10	0	40	0	60		[illegible]		[illegible]		[illegible]	10	[illegible]
	Safety	2	5	0	10	0	5	2	20		5	5	10	5	15	5	15	5	10	0	5	10	30		[illegible]		[illegible]		[illegible]	17	[illegible]
	Security	0	5	0	5	0	35	0	45		5	15	35	15	40	2	5	20	20	0	5	22	30		[illegible]		[illegible]		[illegible]	37	[illegible]
	Esthetics	2	10	2	5	10	15	14	30		5	12	15	12	20	2	5	7	15	0	10	9	30		[illegible]		[illegible]		[illegible]	35	[illegible]
Soiled Linen	Sanitation	30	40	10	50		30	40	120		80		50		130	0	50	7	30		40	7	120	2	[illegible]	0	[illegible]	2	[illegible]	49	[illegible]
	Safety	2	5	0	5		5	2	15		5		5		10	0	10	1	5		15	1	30	2	[illegible]	0	[illegible]	2	[illegible]	5	[illegible]
	Security	2	5	0	5		5	2	15		5		15		20	0	15	0	20		5	0	40	0	[illegible]	0	[illegible]	0	[illegible]	2	[illegible]
	Esthetics	15	20	5	15		10	20	45		10		10		20	0	5	2	5		5	2	15	2	[illegible]	0	[illegible]	2	[illegible]	24	[illegible]
Rubbish	Sanitation	2	5	5	10		10	7	25		20		15		35	0	10	2	10	4	15	6	35	0	[illegible]	0	[illegible]	0	[illegible]	13	[illegible]
	Safety	5	15	5	20		25	10	60		20		45		65	0	15	6	25	6	25	12	65	0	[illegible]	0	[illegible]	0	[illegible]	22	[illegible]
	Security	2	5	0	5		20	2	30		5		15		20	0	5	0	15	0	10	0	30	0	15	30	[illegible]	30	45	32	125
	Esthetics	7	15	5	15		10	12	40		10		10		20	0	5	1	5	1	5	2	15	0	[illegible]	0	[illegible]	0	[illegible]	14	[illegible]
Reusable Patient Items	Sanitation	10	15	5	20	7	25	22	60		15		15		30	5	20	5	10	0	15	10	45		[illegible]		[illegible]		[illegible]	32	[illegible]
	Safety	5	15	5	20	0	5	10	40		15		5		20	3	15	0	5	0	15	3	35		[illegible]		[illegible]		[illegible]	13	[illegible]
	Security	0	15	0	5	7	15	7	35		5		15		20	0	10	0	15	0	15	0	40		[illegible]		[illegible]		[illegible]	7	[illegible]
	Esthetics	2	5	2	5	2	5	6	15		5		5		10	2	5	2	5	0	5	4	15		[illegible]		[illegible]		[illegible]	10	[illegible]
Non-Combustible	Sanitation	2	5	2	10		10	4	25		15		5		20	0	5	1	5	1	5	2	15	7	[illegible]	30	[illegible]	37	[illegible]	43	[illegible]
	Safety	5	20	3	15		20	8	55		15		20		35	0	10	2	10	2	10	4	30	1	5	6	25	7	30	19	150
	Security	5	10	0	5		15	5	30		5		10		15	0	5	0	10	0	5	0	20	0	5	15	15	15	20	20	85
	Esthetics	5	10	2	5		5	7	20		5		5		10	0	5	1	5	1	5	2	15	2	[illegible]	2	[illegible]	4	[illegible]	13	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	2	5		15	4	25		5		15		20	0	5	1	5	4	15	5	25	0	[illegible]	0	[illegible]	0	[illegible]	9	[illegible]
	Safety	2	5	2	5		5	4	15		5		5		10	0	5	1	5	1	5	2	15	0	[illegible]	0	[illegible]	0	[illegible]	6	[illegible]
	Security	0	5	0	5		5	0	15		5		5		10	0	5	0	5	0	5	0	15	0	[illegible]	5	[illegible]	5	[illegible]	5	[illegible]
	Esthetics	4	15	1	5		10	5	30		5		10		15	0	5	2	10	1	5	3	20	4	[illegible]	0	[illegible]	4	[illegible]	12	[illegible]
Food Service Items	Sanitation	2	5	2	5	10	10	14	20		5		10		15		5		5		15		25	1	[illegible]	3	[illegible]	4	[illegible]	18	[illegible]
	Safety	5	10	0	10	5	10	10	30		5		10		15		5		5		10		20	1	5	0	10	1	15	11	[illegible]
	Security	0	5	0	5	5	5	5	15		5		5		10		5		5		5		15	0	5	0	5	0	10	5	[illegible]
	Esthetics	2	5	2	5	5	5	9	15		5		5		10		5		5		5		15	2	5	0	5	2	10	11	[illegible]
Total	Sanitation	53	135	31	185	17	155	101	475		210	0	165	0	375	5	135	19	85	14	165	38	385	10	[illegible]	33	[illegible]	43	[illegible]	182	[illegible]
	Safety	36	115	15	135	5	85	56	335		115	5	110	5	225	8	120	16	70	11	95	35	285	4	[illegible]	26	[illegible]	30	[illegible]	126	[illegible]
	Security	9	80	0	40	12	125	21	245		40	15	125	15	165	2	55	20	115	0	60	22	230	0	[illegible]	110	[illegible]	110	[illegible]	168	[illegible]
	Esthetics	37	85	19	60	17	65	73	210		50	12	65	12	115	4	40	17	55	4	45	25	140	10	[illegible]	2	[illegible]	12	[illegible]	122	[illegible]
TOTAL		135	415	65	420	51	430	251	1265		415	32	465	32	880	19	350	72	325	29	365	120	1040	24	275	171	840	195	1115	598	4300

SYSTEM 4

Type of Waste		Unit System								Inter-Unit System						Inter-Building System								Off-Site System							
		Initial Deposit (Receiver)		Initial Transfer		Initial Storage, Processing, Disposal		Def. Value Total	Max. Value Total	Vertical Transfer		Intermediate Storage, Processing, Disposal		Def Value Total	Max. Value Total	Internal Transfer		Central Storage		Central Processing or Disposal		Def. Value Total	Max. Value Total	External Transfer		Final Processing and/or Disposal		Def. Value Total	Max. Value Total	Def. Value Total	Max. Value Total
		Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value	Def. Value	Max. Value			Def. Value	Max. Value	Def. Value	Max. Value				
Sharps, Needles, Etc.	Sanitation	0	40	0	50		20	0	110		50		20		70	0	30	3	10	5	20	8	60	5	[illegible]	40	[illegible]	45	[illegible]	53	[illegible]
	Safety	10	40	0	50		10	10	100		45		10		55	0	45	1	5	2	10	3	60	2	[illegible]	38	[illegible]	40	[illegible]	53	[illegible]
	Security	0	30	0	5		25	0	60		5		25		30	0	5	0	25	0	10	0	40	0	[illegible]	0	[illegible]	0	[illegible]	0	[illegible]
	Esthetics	0	5	0	5		5	0	15		5		5		10	0	5	2	5	1	5	3	15	1	[illegible]	5	[illegible]	6	[illegible]	9	45
Surgical, Pathological & Animals	Sanitation	5	20	5	35	0	35	10	90		20	0	35	0	55	0	10	0	10	0	40	0	60		[illegible]		[illegible]		[illegible]	10	[illegible]
	Safety	2	5	0	10	0	5	2	20		5	5	10	5	15	5	15	5	10	0	5	10	30		[illegible]		[illegible]		[illegible]	17	[illegible]
	Security	0	5	0	5	0	35	0	45		5	15	35	15	40	2	5	20	20	0	5	22	30		[illegible]		[illegible]		[illegible]	37	[illegible]
	Esthetics	2	10	2	5	10	15	14	30		5	12	15	12	20	2	5	7	15	0	10	9	30		[illegible]		[illegible]		[illegible]	35	[illegible]
Soiled Linen	Sanitation	30	40	10	50		30	40	120		80		50		130	0	50	7	30		40	7	120	2	[illegible]	0	[illegible]	2	[illegible]	49	[illegible]
	Safety	2	5	0	5		5	2	15		5		5		10	0	10	1	5		15	1	30	2	[illegible]	0	[illegible]	2	[illegible]	5	[illegible]
	Security	2	5	0	5		5	2	15		5		15		20	0	15	0	20		5	0	40	0	[illegible]	0	[illegible]	0	[illegible]	2	[illegible]
	Esthetics	15	20	5	15		10	20	45		10		10		20	0	5	2	5		5	2	15	2	[illegible]	0	[illegible]	2	[illegible]	24	[illegible]
Rubbish	Sanitation	2	5	5	10		10	7	25		20		15		35	0	10	2	10	4	15	6	35	2	[illegible]	28	[illegible]	30	[illegible]	43	[illegible]
	Safety	5	15	5	20		25	10	60		20		45		65	0	15	6	25	6	25	12	65	2	[illegible]	12	[illegible]	14	[illegible]	36	[illegible]
	Security	2	5	0	5		20	2	30		5		15		20	0	5	0	15	0	10	0	30	0	15	0	[illegible]	0	45	2	125
	Esthetics	7	15	5	15		10	12	40		10		10		20	0	5	1	5	1	5	2	15	2	[illegible]	4	[illegible]	6	[illegible]	20	[illegible]
Reusable Patient Items	Sanitation	10	15	5	20	7	25	22	60		15		15		30	5	20	5	10	0	15	10	45		[illegible]		[illegible]		[illegible]	32	[illegible]
	Safety	5	15	5	20	0	5	10	40		15		5		20	3	15	0	5	0	15	3	35		[illegible]		[illegible]		[illegible]	13	[illegible]
	Security	0	15	0	5	7	15	7	35		5		15		20	0	10	0	15	0	15	0	40		[illegible]		[illegible]		[illegible]	7	[illegible]
	Esthetics	2	5	2	5	2	5	6	15		5		5		10	2	5	2	5	0	5	4	15		[illegible]		[illegible]		[illegible]	10	[illegible]
Non-Combustible	Sanitation	2	5	2	10		10	4	25		15		5		20	0	5	1	5	1	5	2	15	2	[illegible]	30	[illegible]	32	[illegible]	38	[illegible]
	Safety	5	20	3	15		20	8	55		15		20		35	0	10	2	10	2	10	4	30	0	5	13	25	13	30	25	150
	Security	5	10	0	5		15	5	30		5		10		15	0	5	0	10	0	5	0	20	0	5	15	15	15	20	20	85
	Esthetics	5	10	2	5		5	7	20		5		5		10	0	5	1	5	1	5	2	15	2	[illegible]	2	[illegible]	4	[illegible]	13	[illegible]
Garbage (Non-Grindable)	Sanitation	2	5	2	5		15	4	25		5		15		20	0	5	1	5	4	15	5	25	2	10	8	15	10	25	19	95
	Safety	2	5	2	5		5	4	15		5		5		10	0	5	1	5	1	5	2	15	1	5	5	10	6	15	12	[illegible]
	Security	0	5	0	5		5	0	15		5		5		10	0	5	0	5	0	5	0	15	0	5	0	5	0	10	0	[illegible]
	Esthetics	4	15	1	5		10	5	30		5		10		15	0	5	2	10	1	5	3	20	4	15	4	[illegible]	8	35	16	[illegible]
Food Service Items	Sanitation	2	5	2	5	10	10	14	20		5		10		15		5		5		15		25	1	[illegible]	3	[illegible]	4	[illegible]	18	[illegible]
	Safety	5	10	0	10	5	10	10	30		5		10		15		5		5		10		20	1	5	0	10	1	15	11	[illegible]
	Security	0	5	0	5	5	5	5	15		5		5		10		5		5		5		15	0	5	0	5	0	10	5	[illegible]
	Esthetics	2	5	2	5	5	5	9	15		5		5		10		5		5		5		15	2	5	0	5	2	10	11	[illegible]
Total	Sanitation	53	135	31	185	17	155	101	475		210	0	165	0	375	5	135	19	85	14	165	38	385	14	[illegible]	109	[illegible]	123	[illegible]	262	[illegible]
	Safety	36	115	15	135	5	85	56	335		115	5	110	5	225	8	120	16	70	11	95	35	285	8	[illegible]	68	[illegible]	76	[illegible]	172	[illegible]
	Security	9	80	0	40	12	125	21	245		40	15	125	15	165	2	55	20	115	0	60	22	230	0	[illegible]	15	[illegible]	15	[illegible]	73	[illegible]
	Esthetics	37	85	19	60	17	65	73	210		50	12	65	12	115	4	40	17	55	4	45	25	140	13	[illegible]	15	[illegible]	28	[illegible]	138	[illegible]
TOTAL		135	415	65	420	51	430	251	1265		415	32	465	32	880	19	350	72	325	29	365	120	1040	35	275	207	840	242	1115	645	4300

ESTIMATED DAILY LABOR COSTS OF HOSPITAL SOLID WASTE SYSTEMS

MIRA LOMA HOSPITAL

SYSTEMS 1, 4 & 5

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./ Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./ Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./ Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./ Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	1.0	$ 5.72	$ 5.72						Equip. Op.I	$5.28	0.1	$ 0.53	$ 0.53						$ 6.25
Pathological and Surgical	Lab Tech.	4.12	0.5	2.06	2.06	Custodian	$3.71	0.5	$1.86	$1.86											3.92
Soiled Linen	Nurse Attendant	5.72 3.34	4.0 25.0	22.88 83.50	106.38						Equip. Op.I	5.28	2.6	13.73	13.73	Truck Dr.	$4.74	0.2	$0.96	$0.96	121.07
Rubbish	Custodian	3.71	20.0	74.20	74.20						Equip. Op.I	5.28	0.9	4.75	4.75						78.95
Reusable Patient Items	Nurse Attendant	5.72 3.34	1.5 3.5	8.58 11.69	20.27						Custodian	3.71	0.5	1.86	1.86						22.13
Non-Combustible	Custodian	3.71	1.5	5.57	5.57						Equip. Op.I	5.28	0.2	1.06	1.06	Truck Dr.	4.74	1.0	4.74	4.74	11.37
Garbage (Non-Grindable)	Fd.Srv.Wk	3.42	6.0	20.52	20.52						Equip. Op.I	5.28	0.3	1.59	1.59						22.11
Food Service Items	Nurse Attendant	5.72 3.34	4.0 14.0	22.88 46.76	69.64																69.64
Radiological																					
Ash & Residue																					
Animal Carcasses																					
Food Waste (Grindable)	Fd.Srv.Wk	3.42	4.5	15.39	15.39																15.39
					$319.75					$1.86					$23.52					$5.70	$350.83

SYSTEM 2

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./ Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./ Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./ Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./ Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	1.0	$ 5.72	$ 5.72						Inc. Op.	$5.78	0.1	$ 0.58	$ 0.58						$ 6.30
Pathological and Surgical	Lab Tech.	4.12	0.5	2.06	2.06	Custodian	$3.71	0.5	$1.86	$1.86											3.92
Soiled Linen	Nurse Attendant	5.72 3.34	4.0 25.0	22.88 83.50	106.38						Inc. Op.	5.78	1.0	5.78	5.78						112.16
Rubbish	Custodian	3.71	20.0	74.20	74.20						Inc. Op.	5.78	3.7	21.39	21.39						95.59
Reusable Patient Items	Nurse Attendant	5.72 3.34	1.5 3.5	8.58 11.69	20.27						Custodian	3.71	0.5	1.86	1.86						22.13
Non-Combustible	Custodian	3.71	1.5	5.57	5.57						Inc. Op.	5.78	1.0	5.78	5.78	Truck Dr.	$4.74	0.5	$2.37	$2.37	13.72
Garbage (Non-Grindable)	Fd.Srv.Wk	3.42	6.0	20.52	20.52						Inc. Op.	5.78	1.3	7.51	7.51						28.03
Food Service Items	Nurse Attendant	5.72 3.34	4.0 14.0	22.88 46.76	69.64																69.64
Radiological																					
Ash & Residue											Inc. Op.	5.78	1.0	5.78	5.78	Truck Dr.	4.74	0.5	2.37	2.37	8.15
Animal Carcasses																					
Food Waste (Grindable)	Fd.Srv.Wk	3.42	4.5	15.39	15.39																15.39
					$319.75					$1.86					$48.68					$4.74	$375.03

ESTIMATED DAILY LABOR COSTS OF HOSPITAL SOLID WASTE SYSTEMS

SYSTEMS 3, 6 & 7

MIRA LOMA HOSPITAL

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	1.0	$ 5.72	$ 5.72						Equip. Op.I	$5.28	0.1	$ 0.53	$ 0.53	Truck Dr.	$4.74	0.1	$ 0.47	$ 0.47	$ 6.72
Pathological and Surgical	Lab Tech.	4.12	0.5	2.06	2.06	Custodian	$3.71	0.5	$1.86	$1.86											3.92
Soiled Linen	Nurse Attendant	5.72 3.34	4.0 25.0	22.88 83.50	106.38						Equip. Op.I	5.28	2.6	13.73	13.73	Truck Dr.	4.74	0.2	0.96	0.96	121.07
Rubbish	Custodian	3.71	20.0	74.20	74.20						Equip. Op.I	5.28	0.9	4.75	4.75	Truck Dr.	4.74	2.6	12.32	12.32	91.27
Reusable Patient Items	Nurse Attendant	5.72 3.34	1.5 3.5	8.58 11.69	20.27						Custodian	3.71	0.5	1.86	1.86						22.13
Non-Combustible	Custodian	3.71	1.5	5.57	5.57						Equip. Op.I	5.28	0.2	1.06	1.06	Truck Dr.	4.74	0.5	2.37	2.37	9.30
Garbage (Non-Grindable)	Fd.Srv.Wk	3.42	6.0	20.52	20.52						Equip. Op.I	5.28	0.3	1.59	1.59	Truck Dr.	4.74	0.8	3.79	3.79	25.90
Food Service Items	Nurse Attendant	5.72 3.34	4.0 14.0	22.88 46.76	69.64																69.64
Radiological																					
Ash & Residue																					
Animal Carcasses																					
Food Waste (Grindable)	Fd.Srv.Wk	3.42	4.5	15.39	15.39																15.39
					$319.75					$1.86					$23.52					$19.91	$365.04

SYSTEM 8

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	1.0	$ 5.72	$ 5.72						Equip. Op.II	$4.94	0.1	$ 0.49	$ 0.49	Truck Dr.	$4.74	0.05	$0.24	$0.24	$ 6.45
Pathological and Surgical	Lab Tech.	4.12	0.5	2.06	2.06	Custodian	$3.71	0.5	$1.86	$1.86											3.92
Soiled Linen	Nurse Attendant	5.72 3.34	4.0 25.0	22.88 83.50	106.38						Equip. Op.II	4.94	2.6	12.84	12.84						119.22
Rubbish	Custodian	3.71	20.0	74.20	74.20						Equip. Op.II	4.94	0.9	4.45	4.45	Truck Dr.	4.74	0.85	4.03	4.03	82.60
Reusable Patient Items	Nurse Attendant	5.72 3.34	1.5 3.5	8.58 11.69	20.27						Custodian	3.71	0.5	1.86	1.86						22.13
Non-Combustible	Custodian	3.71	1.5	5.57	5.57						Equip. Op.II	4.94	0.2	0.99	0.99	Truck Dr.	4.74	0.05	0.24	0.24	6.80
Garbage (Non-Grindable)	Fd.Srv.Wk	3.42	6.0	20.52	20.52						Equip. Op.II	4.94	0.3	1.48	1.48	Truck Dr.	4.74	0.05	0.24	0.24	22.24
Food Service Items	Nurse Attendant	5.72 3.34	4.0 14.0	22.88 46.76	69.64																69.64
Radiological																					
Ash & Residue																					
Animal Carcasses																					
Food Waste (Grindable)	Fd.Srv.Wk	3.42	4.5	15.39	15.39																15.39
					$319.75					$1.86					$22.11					$4.75	$348.47

ESTIMATED DAILY LABOR COSTS OF HOSPITAL SOLID WASTE SYSTEMS
SYSTEM 9

MIRA LOMA HOSPITAL

	Unit System					Inter-Unit System					Inter-Building System					Off-Site System					
Types of Waste	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	Type Employee	Pay Rate	Hr./Day	Emp. Total	Unit System Total	TOTAL
Sharps, Needles, Etc.	Nurse	$5.72	1.0	$ 5.72	$ 5.72						Engin. Op.II	$4.94	0.1	$ 0.49	$ 0.49	Truck Dr.	$4.74	0.1	$ 0.47	$ 0.47	$ 6.68
Pathological and Surgical	Lab Tech	4.12	0.5	2.06	2.06	Custodian	$3.71	0.5	$1.86	$1.86											3.92
Soiled Linen	Nurse Attendant	5.72 3.34	4.0 25.0	22.88 83.50	106.38						Engin. Op.II	4.94	2.6	12.84	12.84	Truck Dr.	4.74	0.2	0.96	0.96	120.18
Rubbish	Custodian	3.71	20.0	74.20	74.20						Engin. Op.II	4.94	0.9	4.45	4.45	Truck Dr.	4.74	2.6	1[illegible].32	12.22	90.97
Reusable Patient Items	Nurse Attendant	5.72 3.34	1.5 3.5	8.58 11.69	20.27						Custodian	3.71	0.5	1.86	1.86						22.13
Non-Combustible	Custodian	3.71	1.5	5.57	5.57						Engin. Op.II	4.94	0.2	0.99	0.99	Truck Dr.	4.74	0.5	2.37	2.37	8.93
Garbage (Non-Grindable)	Fd.Srv.Wk	3.42	6.0	20.52	20.52						Engin. Op.II	4.94	0.3	1.48	1.48	Truck Dr.	4.74	0.8	3.79	3.79	25.79
Food Service Items	Nurse Attendant	5.72 3.34	4.0 14.0	22.88 46.76	69.64																69.64
Radiological																					
Ash & Residue																					
Animal Carcasses																					
Food Waste (Grindable)	Fd.Srv.Wk	3.42	4.5	15.39	15.39																15.39
					$319.75					$1.86					$22.11					$19.91	$363.63